

[REDACTED]

5

Director
American Society for
ATTN: Archivist
Maxwell A. Gluck Library

31, 1975
Aerospace Rescue & Recovery Service (MRC)

Briefunge.

Combat Aircen Recovery
May 65 - July 67

1995 HARVEST

DESTROY

000 5825 CATALOGED
000 5826 CATALOGED
000 5827 CATALOGED

No

MIRACODED

Date _____

at 3 year
declassified
after 12 years

7-2601-7

CONFIDENTIAL

THE AIR FORCE
RECOVERY SERVICE
SCOTT AFB, ILLINOIS 62225

CONFIDENTIAL

BROOKS

MAY 1965

Slide 2. → General McConnell, we are indeed grateful to have this opportunity to discuss with you combat aircrew recovery in SE Asia.

Slide 3. → This presentation will briefly cover the background, review of the current situation, deficiencies which affect recovery operations, the corrective actions necessary to improve matters, and, finally, our recommendations.

Slide 4. → First, a few words on the background of combat aircrew recovery.

After Korea, the combat aircrew recovery resources of the Air Rescue Service were reduced and the combat crew recovery mission eliminated. The small numbers of helicopters were dispersed to all parts of the world to provide a peacetime rescue capability. The only combat crew recovery capability consisted of one group of long-range C-47s for deep penetration recoveries of SAC crews from behind-the-lines. In 1958, even this group was eliminated. Consequently, the development of combat recovery tactics did not keep pace with other developments in the tactical forces. By September of 1961, all recovery helicopters had been retired and Air Rescue Service was equipped with only 58 fixed-wing aircraft. Rescue Service efforts were directed toward peacetime tasks. In planning, it was envisioned that contingency tasks would be

MIRACODE

Reproduced on 23 Dec 1974 by H. R. C.
by authority of AFSSC. Reproduced
Copy # 1 of 1 of (s) "

DECLASSIFIED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 2200.10

PROJECT CORONA HARVEST
WORKING PAPERS
0005827 CATALOGED
WORKING PAPERS

PROJECT CORONA HARVEST
WORKING PAPERS
304

~~SECRET~~ CONFIDENTIAL

accomplished by an extension of the peacetime effort. The same equipment was to be used for both. It is important to note, however, that aircraft and equipment designed for peacetime will not always suffice for wartime, but aircraft designed for wartime will generally fulfill peacetime requirements.

SLIDE
5

→ With the initiation of hostilities in SE Asia, the Air Force was not prepared to effectively accomplish the combat rescue mission. *→ All aircraft in the inventory were outdated.* Recovery tactics had to be developed as the war progressed, since no recorded operational doctrine or combat recovery manuals were available. Progress is being made, however, and the outdated equipment is being used to the best of our ability. The record shows there is a lot to be desired. Response is too slow; we are limited to daylight operation, and the Rescue equipment is not compatible with that of the forces being supported. These are deficiencies which must be corrected on an expedited basis.

SLIDE
6

→ The value of combat crew morale needs no amplification. When combat crews are assured of a reasonable chance of being rescued, certainly their effectiveness is enhanced. Although no one has ever been able to calculate the value of an airman's life, the cost of training combat crews and the time lost for training can be measured. Therefore, recovery represents a monetary value to this nation, and, more importantly, conserves this valuable trained resource.

~~SECRET~~ CONFIDENTIAL

~~CONFIDENTIAL~~

Slide 7 → The Air Rescue Service was called on to provide a combat aircrew recovery capability in SE Asia in May 1964. However, the first published recognition of a wartime role was not contained in any document until it appeared in the USAF Wartime Guidance in March 1965. Since this publication receives limited distribution, the authority for support that Rescue needs to develop the combat capability is not ~~widely~~ recognized.

Under the present circumstances, the Air Force must take immediate steps to insure that all echelons recognize the combat role of the Rescue Service. With this background information, let's take a look at how the recovery forces were developed in SE Asia and where we stand today.

Slide 8 → This slide shows initial ARS forces in SEA from June 1964 through August of that year: **We had 7 aircraft.**

2 HU-16s at Da Nang

2 HU-16s at Korat

3 Unarmored HH-43Bs at Nakhon Phanom

Slide 9 → Since that date, we have improved the force structure. As of now, we have the 38th Air Rescue Squadron at Tan Son Nhut with 10 helicopter detachments in Viet Nam and Thailand. The detachments have a total of 28 short-range helicopters. The Binh Thuy and Pleiku detachments are authorized, but will not be physically in place until later this year. **[17 HH-43Bs, 9 HH-43Fs, 2 CH-3Cs]**

~~CONFIDENTIAL~~ for ref. only

3

WORKING PAPERS

~~SECRET~~

WORKING PAPERS

~~SECRET~~ CONFIDENTIAL

From Udorn we operate 4 HC-54s and from Da Nang, 5 HU-16s.

With this force structure, the following tactics are employed to search for, locate, and recover downed combat personnel.

SLIDE
10

~~Direction~~ Direction for preplanned missions comes from the 2d AD Frag Order, ^{AND} The 38th squadron alerts and directs Rescue forces by Frag Order ~~transmitted by ground relay~~, ^{There} to meet mission requirements, ~~which~~ include:

SLIDE
11

Fixed-wing orbits by HC-54s along the Thailand border, and HU-16 orbits in the Gulf of Tonkin area. These aircraft act as forward on-scene mission command posts to coordinate and control recovery activities as required. The Frag Order may also specify that the helicopters will be prepositioned at advanced locations that are as close as possible to the planned strike areas, such as Site 36 in Northern Laos. Within their limited range capabilities, the helicopters are scrambled by the orbiting Rescue fixed-wing aircraft as required. In addition to the helicopters operating forward, a scramble alert posture is maintained by each detachment to meet any emergency within their capability.

SLIDE
12

→ RESCAP and hostile fire suppression are furnished by tactical forces. ~~Direct~~ Two-way radio communications are maintained between strike and ARS forces. Rescue aircraft in orbit maintain

4 WORKING PAPERS

~~SECRET~~ CONFIDENTIAL WORKING PAPERS


CONFIDENTIAL

continuous radio contact with directing agencies.

As the tactical mission activity has rapidly expanded in SE Asia, the outdated equipment has seriously restricted our capability, and we have been forced to rely upon the HH-43 and HU-16 as our primary combat recovery vehicles.

The HH-43B was designed and procured specifically for the local base rescue mission. It was not envisioned to be used for the combat recovery role. This slide shows the short radius of the B and F models. The normal B radius is in green, the F in red. By carrying additional 55 gallon drums of fuel, the radius of the B model has been extended to equal that of the HH-43F, as shown here. The combat configuration of the -43F provides auxiliary self sealing tanks, however, this radius is still inadequate for recovery operations in North Viet Nam, even by staging out of forward sites in Laos. (Show Slide 36 and Hue Phu BI)

The emergency loan from TAC of 2 CH-3Cs has helped some, but does not fully meet the range, speed, and loiter requirements. However, staging from the forward locations in Laos, it can reach any point in the northern portion of North Viet Nam. Note the radius in yellow.

The HC-54 and HU-16 are not compatible to the combat recovery mission. Both are restricted in speed and ceiling, with no recovery capability over land. The HU-16 has a limited capability when daytime water conditions permit.

CONFIDENTIAL

CONFIDENTIAL

With these forces, Rescue has successfully saved 70 combat personnel, including:

36 USAF

15 USN

15 USA

4 VNAF

These were picked up at the locations shown. Of these 70 saves, 60 were combat crew members.

However, out of 177 requests, this gives us only a 34% effectiveness rating. We believe this percentage can be and must be improved.

Now, let's look at some of the major deficiencies hampering effective recovery operations.

Besides the limitations in range of the HH-43B helicopters, as previously shown, this small aircraft is limited to daylight VFR operations. Its top speed is 90 knots, there are no provisions for crew or aircraft protective armor, and it is single engine.

The HH-43F has been specially configured for aircrew recovery in SE Asia, with crew and component protective armor, an upgraded engine, and shatterproof glass. However, it is only marginally capable of limited instrument and night operations; the radius of actions is only 130 N miles; and no increase in speed has been achieved.

CONFIDENTIAL

Slide 20

→ The Ch-3C was bought by the Air Force as a general utility helicopter. This aircraft is not configured for combat operations, and does not have auxiliary tanks for extended range or loiter. In addition, there are no provisions for suppressive armament.

Slide 21

→ The HC-54 has no recovery capability, is over 20 years old, cruises at 140 knots, ^{AND} is not compatible with the tactical forces in terms of speed and altitude. It lacks a controller position with suitable communications to direct recovery operations. No back-up communications equipment is installed.

Slide 22

→ The HU-16 is limited to VFR daylight water landings in relatively smooth sea conditions. This aircraft has been in the inventory since 1949, and like the HC-54, is slow and limited to low altitude operations. It is important to bear in mind that these aircraft were adapted for the peacetime rescue mission. None were bought or designed for combat aircrew recovery. The low speeds of all the aircraft delay recovery, and higher speeds are required to reduce the time interval between ejection and pickup.

Slide 23

→ In the personal survivor equipment area, there are serious deficiencies. For example, the URC-10 and URT-21 beacon have proven to be inadequate in battery life reliability and range. In addition, we have experienced shortages in supply and test equipment. A new type battery, plus test equipment, are being delivered in SE Asia at

~~CONFIDENTIAL~~
CONFIDENTIAL

at the present time. This is only a stop-gap measure, and recommendations will be made later as to positive corrective action. In addition to the improved batteries and test equipment, a pre-amplifier is being installed in rescue aircraft which will increase the reception range.

Slide
24

→ The visual signaling devices have proven difficult to ~~distinguish~~ **IDENTIFY**. The only available pen gun flares and strobe lights look like enemy groundfire from the air and this creates confusion in the recovery zone. Corrective action is being taken to develop a pen flare, with foliage penetration capabilities, and a star burst shell. In addition, a sleeve on the strobe light is being developed with a built in filter to make directional and flash changes so that it does not look like gunfire. This sleeve has been tested, approved by 2d AD, and deliveries are expected in November 1965. Again, these are only stop-gap measures.

Slide
25

→ In respect to the Avionics/Communications area, the lack of adequate NAVAIDS at the forward sites limits use to day VFR conditions. Our headquarters is investigating the possibility of providing a portable navigation beacon at forward sites, ~~which will~~ **eliminate this problem.** ~~At~~ **also** at the present time, action is **also** underway to install a TACAN in Northern Laos.

Another lesson learned is that the pilot of the rescue fixed-wing aircraft can't control and plot the positions of recovery and

~~CONFIDENTIAL~~ CONFIDENTIAL

SUMMARY
tactical aircraft and fly his own aircraft at the same time. When a recovery mission is in progress, the Rescue aircraft commander must coordinate and direct the activities of the recovery aircraft, direct RESCAP and fire suppression tactical aircraft, and maintain a complete current status of all aircraft involved. To effectively manage all facets of the mission, an additional mission controller's position is required in the control aircraft. At the present time, HC-54s are being JURYRIGG modified in the theatre to provide this extra control position.

SAIDE
26

→ In order to reduce the access time to the area north and west of Hanoi, our helicopters have been staging from crude forward operating locations in Laos. Refueling from 55 gallon drums, with hand pumps, is incompatible with the current status of air technology, but these are conditions under which our recovery forces have been forced to operate. We are taking action at the present time to provide portable rubberized fuel cells, with powered fuel pumps, to facilitate operations from these sites. These forward bases have contributed, in great part, to several successful recoveries. A like capability on the east coast of North Viet Nam would also be desirable, ~~to decrease the time and distance required to reach the downed airman.~~ Since there are no friendly forward bases to operate from in proximity to the eastern area of North Viet Nam, we are requesting the Navy to

CONFIDENTIAL

~~SECRET~~

~~CONFIDENTIAL~~ CONFIDENTIAL

provide information on the availability of a surface vessel with a helicopter landing pad. This ship would operate in the Gulf of Tonkin with helicopters aboard, and provide a more rapid response than is presently possible in the coastal areas of North Viet Nam. This would only be an interim measure, however, until receipt of the HC-130/HH-3 air-to-air refueling system, which will be discussed in a few moments.

SLIDE
27

→ The introduction of 6 HH-3^E helicopters in November of this year is the first major step to correct aircraft deficiencies. ~~The HH-3E~~ ^{IT} is combat configured: equipped for IFR operations, and provided with an increased fuel capacity. The inclusion of Doppler radar permits precision navigation, under instrument conditions, to a pre-determined point. It is fitted with crew and critical component armor, communications equipment compatible with all aircraft currently operating in SE Asia, and a 240 foot hoist to penetrate dense jungle foliage. As

SLIDE
28

→ shown on this slide, the increased range of the HH-3^E over the helicopters used to date, will offer a substantial increase in recovery capability. For example, ~~operating out of Udorn or Da Nang~~ ^{IT} can reach any point in North Viet Nam and return to home base. If operated from a forward location, such as Site 36 in Laos, the additional range capability can be converted to loiter time to provide ~~more~~ ^{more} rapid response to an emergency deep in North Viet Nam. To increase

~~CONFIDENTIAL~~ CONFIDENTIAL

~~CONFIDENTIAL~~ CONFIDENTIAL

*
SLIDE
29

loiter time to an even greater degree, and further enhance this capability, an air-to-air refueling system is being developed which will enable the HH-3 to remain on station for extended periods. This system is currently in the preliminary testing phase. If development and testing of this air-to-air refueling system can be accelerated, it is believed that an operational system can be employed in Viet Nam by July of 1966. Air-to-air refueling will eliminate the requirement for operations from Laotian sites.

Greatly With the introduction of the HC-130/HH-3 team in Viet Nam, a *greatly improved* combat recovery system will be realized for the first time.

The major limitation will be in the numbers of aircraft available.

SLIDE
30

→ Not until late 1966, will the long range recovery helicopter force reach the level of 16. This force was planned prior to the March 1965 strikes in North Viet Nam, and was based on the level of tactical activities which existed prior to that time. In order to meet the recovery requirements based on the current level of conflict, and approved tactical attrition rates, 11 HC-130s and 32 HH-3 aircraft are required NOW.

SLIDE
31

The introduction of the HC-130 will provide an improved communications and control capability over the "make-shift" system which is now being installed in the HC-54. A built in manual plotting position, with redundant communications, will enable the recovery controller to plot the positions, call signs, ordnance, and

~~CONFIDENTIAL~~ CONFIDENTIAL

~~SECRET~~ CONFIDENTIAL

fuel conditions of participating tactical and recovery aircraft. This will result in a more effective direction of the effort. Until recovery controllers are completely familiar with tactical procedures and control, this position is expected to be jointly manned by recovery and tactical personnel.

SLIDE

32

→ ~~partially resolved~~

The current lack of capability for night recovery will be upon receipt of the HH-3 helicopters, operating in conjunction with the fixed-wing aircraft. The IFR Doppler equipped HH-3 will proceed to the pickup area after the survivor has been visually or electronically located by the fixed-wing aircraft. The helicopter will be vectored to the pickup point, and a flare drop pattern established by the fixed-wing aircraft. The helicopter will then proceed, as during daylight hours, with suppression fire provided by a RESCAP flight working under the flares.

SLIDE

33


→ This brings up the problem of protection for our own aircraft. The only armament currently provided to the helicopter crews for suppression fire is the M-16 automatic rifle. Many recoveries have been delayed awaiting fighter support to drive off enemy ground troops. An increased capability in suppression armament for the helicopter crews is required to permit a greater degree of self-reliance and protection. Lightweight automatic weapons are available which provide a rate of fire up to 6,000 rounds per minute. Immediate attention must be given to studying the feasibility of equipping recovery helicopters with this type weapon.

LESSON
LEARNED

WORKING PAPERS

~~SECRET~~ CONFIDENTIAL

WORKING PAPERS


 **CONFIDENTIAL**

To reduce the vulnerability of the unarmed HH-43B to groundfire, action is being taken to provide self-sealing main tanks. As long as the B model must be used, the nature of the war in Viet Nam demands that this limited protection be provided to rescue crews. Procurement action has been initiated, and installation will be accomplished in the field.

Now, a comment on organization. When the Air Rescue Service initially assigned resources to SE Asia, they were organized under a detachment of the Pacific Air Rescue Center on a TDY basis. As the requirements increased and activities were stepped up, it became apparent that we could not continue to support the TDY requirement. Therefore, we now have a permanent helicopter squadron with 9 detachments.

At the same time helicopter resources were being assigned to the area, we supported the fixed-wing requirement on a temporary duty basis. This requirement will continue for the foreseeable future, and we have recommended to your Hq, that a fixed-wing squadron be organized on a permanent basis.

At the same time, we reviewed the overall command and control structure, and found, that due to the stepped up activities, there is a requirement for a Senior Rescue-Qualified Officer with a small staff at Tan Son Nhut. This officer will be the Deputy to the Commander 2d AD for all rescue matters. He will command, supervise and control

 **CONFIDENTIAL**

~~CONFIDENTIAL~~

all recovery forces in the area. The reorganization proposal was submitted last month.

ISARC
In addition to providing improved recovery mission control, the new organization will provide adequate staff personnel to continually review and update operational tactics and techniques. We have already initiated action, in conjunction with 2d AD, to document combat recovery doctrine and methodology. A brief of pertinent tactics, in brochure form, will be submitted to 2d AD for coordination. This brochure will be provided to rescue and tactical aircrews to insure clear understanding of combat recovery tactics by all concerned.

(PAUSE)

While it is realized that there are established channels for requesting improved and additional equipment, our inability to meet combat recovery requirements in SE Asia demands that extraordinary measures be taken to correct deficiencies in recovery aircraft and associated equipment.

(PAUSE)

We recommend that an Air Force level project be established to develop an improved combat aircrew recovery system, as a distinct mission of the Air Rescue Service. Action should be expedited, and this project must be provided with the necessary authority, priority and means.

(PAUSE)

We also recommend that:

~~CONFIDENTIAL~~

~~CONFIDENTIAL~~
CONFIDENTIAL

SLIDE
39 →

1. The Systems Command be directed to rephase and expedite the development of air-to-air refueling for the HC-130 and HH-3. A minimum of 6 HC-130s and 11 HH-3s, in the air refueled configuration, to be operational in SEA by 1 July 1966.
2. The delivery of the 32 HH-3 aircraft for SEA be accelerated, with the last aircraft to be in place not later than December 1966.
3. Utilizing minuteman technology and Big Safari ^{TYPE} priorities, direct AFLC to expedite development and procurement of a new personnel survivor radio which combines the beacon features of the URT-21 and the voice capability of the URC-10. This radio should be rugged, and small enough to be carried securely on the crewmember when ejection or bailout is required.
4. That direction be given, and manpower be provided, for a ^{JOINT} ~~test~~ test detachment at Eglin ⁴⁴⁷⁵ ~~for~~ for the evaluation of aircrew ^{74c} recovery techniques and recovery equipment. Each survivor item would be tested under simulated combat conditions for suitability prior to shipment to the field. This will minimize problems such as we've encountered with the pen gun flares and strobe lights.
5. That a decision be made to provide suppression armament for the HH-3 crews. There are several lightweight automatic weapons readily available which would be suitable for this purpose.

~~CONFIDENTIAL~~
CONFIDENTIAL

15 WORKING PAPERS

WORKING PAPERS

WORKING PAPERS

~~CONFIDENTIAL~~

6. That the Air Rescue Service projected requirements study, presented to your staff in June of this year, be used as a basic guide. This will assure a balanced force and a complete system that will be capable of meeting the rescue and recovery requirements as we see them at this time.

Slide
40

→ FOR THE FUTURE, the project office should also be charged with establishing the parameters for a rotary wing or VTOL aircraft. It should be specifically designed and built for the combat recovery mission and should be fully compatible with the tactical forces.

FINALLY, combat aircrew recovery equipment must keep pace with tactical requirements and must be developed concurrently with new tactical systems. To this end, we are consulting with the manufacturers of Aircraft Weapons Systems to evaluate proposals for potential recovery vehicles. We will season and temper their recommendations with our experience.

IN CONCLUSION, the near term requirements are clear and urgent. In the long term, we must very carefully consider and evaluate the proposals for specific systems to meet future combat recovery requirements.

Sir, this completes the presentation.

~~CONFIDENTIAL~~

~~SECRET~~

CONFIDENTIAL
CATALOGED
No. 0005825

AIR FORCE
RECOVERY SERVICE (IN)
ILLINOIS 62225

SLIDE #1

CONFIDENTIAL
Prescribed 29 MAR 67
By Gen Books
To Gen CEs.

Slide 1

The

MY BRIEFING TODAY IS DIRECTED TO SOUTHEAST ASIA

#13

COMBAT AIRCREW RECOVERY, PARTICULARLY TO THE
PROBLEMS ASSOCIATED WITH THE PHASE-IN OF THE
HC-130P/HH-3E TEAM FOR GULF OF TONKIN OPERATIONS
AND THE PHASE-OUT OF THE HU-16.

2
Slide

SLIDE #2

MIT

Reproduced
by authority of
330-19-1
of
cy (sl)

AS YOU KNOW, OUR PRIMARY BASE FOR GULF OF TONKIN
OPERATIONS IS AT DANANG. THE 37th SQUADRON WAS
ORGANIZED AT DANANG IN JANUARY 1966 AND BECAME
OPERATIONAL IN FISCAL 4/66. THE SQUADRON WAS PROGRAMMED
TO PHASE OUT IN FISCAL 3/67, BUT IT BECAME OBVIOUS, DUE
TO SLIPPAGE IN THE DEVELOPMENT OF THE HH-3 REFUELING
PROBE, THAT THE HC-130P/HH-3 TEAM WOULD NOT BE
OPERATIONAL IN TIME TO REPLACE THE HU-16 FOR TONKIN
RECOVERY OPERATIONS. ACTION WAS TAKEN TO RETAIN THE
37th SQUADRON'S HU-16s FOR AN ADDITIONAL QUARTER TO
PHASE OUT BY END JUNE OF THIS YEAR. HOWEVER, PCS
MANNING WAS NOT FEASIBLE FOR ONLY ONE ADDITIONAL
QUARTER. THIS WILL RESULT IN PERSONNEL ROTATIONS IN
APRIL THROUGH JUNE WITHOUT REPLACEMENT EXCEPT BY
TDY PERSONNEL.

335

24 OCT 1966
CONFIDENTIAL
67-1186
PERS
ATCH 5

TO PROVIDE A BACKUP CAPABILITY, ACTION WAS TAKEN
TO INCREASE THE FLYING HOUR PROGRAM AND MANNING
AUTHORIZATIONS OF THE 31st AND 33d SQUADRONS THROUGH
FISCAL 4/67. IT WAS ANTICIPATED THAT THESE ACTIONS WOULD
PROVIDE SUFFICIENT CAPABILITY TO SUPPLEMENT THE
PHASE-IN OF THE HC-130/H-3 TEAM. PHASE-OUT OF THE
HU-16 FOR SEASIA OPERATIONS WAS EXPECTED BY THE END
OF JUNE.

GEN
HU-16

ALTHOUGH A GRADUAL PHASE-IN OF HH-3Es IS CURRENTLY
TAKING PLACE AT DANANG, THE PROGRAM IS SERIOUSLY BEHIND
SCHEDULE. PROBE DEVELOPMENT PROBLEMS AND PRODUCTION
SCHEDULE DELAYS LIMITED THE 48th SQUADRON REFUELING
TRAINING WHICH WAS SCHEDULED TO BEGIN IN JANUARY OF THIS
YEAR. IN ADDITION, UNPROGRAMMED LOSSES AND LACK OF ATTRITION
AIRCRAFT HAVE SERIOUSLY IMPACTED ON THE PLANNED PHASE-IN.
AS A RESULT, THE FORECAST OF ACTUAL POSSESSED H-3
AIRCRAFT AT DANANG IS AS REFLECTED ON THIS SLIDE. (PAUSE)


MAIT
HH 3E
support

Slide 3

SLIDE #3

the indicated in the third item in the previous slide,
and ALSO IMPACTING ON OUR PLANNED ACTIONS IN SEASIA IS
THE LACK OF A SUITABLE BED DOWN BASE FOR THE 11 HC-130Ps.

CONFIDENTIAL
NO FORN DISSEM
NO UNCLASSIFIED RELEASE

 ~~CONFIDENTIAL~~

SINCE DECEMBER OF 1965 WHEN RESCUE FIRST PROGRAMMED
11 HC-130s TO ACCOMPLISH THE COMMAND CONTROL AND
REFUELING FUNCTION IN SEASIA/18 SEPARATE PROPOSALS,
COUNTER-PROPOSALS, OR DECISIONS HAVE BEEN MADE
AFFECTING THE BED DOWN OF THESE AIRCRAFT.

Slide 4

SLIDE #4

THE AGENCIES INVOLVED AND THE NUMBER OF SEPARATE
ACTIONS ARE SHOWN ON THIS SLIDE.

MAT
GEN
MSB

PROBABLY THE MOST IMPORTANT IMPACT ON BED DOWN PLANS
WAS THE CINCPACAF DECISION WHICH ELIMINATED THE PLANNED
C-130 MOB IN SEASIA. LATER, I WILL DISCUSS THE MOB PROBLEM
IN GREATER DETAIL; HOWEVER, FIRST, I WOULD LIKE TO
ADDRESS OUR OBJECTIVE AND OUTLINE THE ACTIONS WHICH
ARE NECESSARY TO ACHIEVE THAT OBJECTIVE. (PAUSE)


5-
Slide

SLIDE #5

THE CONCEPT OF OPERATIONS FOR THE HC-130P/HH-3E
TEAM IS PORTRAYED ON THIS CHART.

3

6
Slide

 ~~CONFIDENTIAL~~
~~CONFIDENTIAL~~

6

SLIDE #6

TO REACH A DESIGNATED LOITER AREA BY FIRST LIGHT,
AN HH-3E WILL DEPART DANANG AT APPROXIMATELY 0400
EACH DAY ON A 5 1/2 HOUR FLIGHT PLAN AGAINST 6 1/2 HOURS
FUEL ON BOARD. THE TRIANGULAR COURSE DISPLAYED HERE
IS A TYPICAL TRACK. UPON REACHING THE NORTHERNMOST
POINT OF THE TRACK, THE AIRCRAFT ENTERS THE LOITER
MODE, ORBITING APPROXIMATELY 30 MINUTES AT THIS POINT
THEN PROCEEDING SOUTHWESTERLY, STILL IN THE LOITER
MODE, REMAINING APPROXIMATELY 30 MILES OFF SHORE.
NAVIGATION WILL BE BY DOPPLER AND TACAN. INFLIGHT
REFUELING WILL NOT BE REQUIRED OR PLANNED UNLESS
THE H-3 IS DIVERTED ON AN EXTENDED RECOVERY MISSION.
TO PROVIDE COMMAND CONTROL, AN HC-130 WILL ALSO BE
ORBITING AT RANDOM IN THE GULF OF TONKIN. A SECOND
HH-3 WILL DEPART DANANG FOUR HOURS LATER WITH A THIRD
AND FOURTH DEPARTING FOUR AND THREE HOURS LATER,
RESPECTIVELY. THIS STREAM OF H-3s WILL PROVIDE
CONTINUOUS ORBITAL COVERAGE IN THE GULF FROM
APPROXIMATELY 0600 TO 1800 EACH DAY.


CONFIDENTIAL

TOP SECRET

[REDACTED]


IN ADDITION TO THE CROWN AIRCRAFT ORBITING IN THE GULF OF TONKIN, AN HC-130P WILL BE MAINTAINED ON ALERT AT DANANG TO PROVIDE BACKUP REFUELING CAPABILITY AND WILL BE SCRAMBLED AS SOON AS AN INCIDENT OCCURS, TO REFUEL THE HH-3, IF REQUIRED. THIS WILL PERMIT THE CROWN AIRCRAFT TO REMAIN ON STATION AS THE COMMAND CONTROL ELEMENT, HOWEVER, IF EMERGENCY REFUELING IS NECESSARY PRIOR TO THE ARRIVAL OF THE REFUELER, THE CROWN AIRCRAFT WILL DESCEND, REFUEL THE HH-3, AND RETURN TO ORBIT TO COORDINATE THE RECOVERY EFFORT.

THIS CONCEPT DOES NOT PROVIDE FOR ROUTINE PENETRATION OF THE LAND MASS. IF AN INCIDENT OCCURS ON THE LAND MASS WHEREIN PENETRATION IS FEASIBLE AS DETERMINED BY 7 AF, IT WILL BE NECESSARY TO FORM A TASK FORCE OF TWO HH-3s, OR AN HH-3 AND A NAVY SH-3, WITH AN ESCORT OF A-1s TO PRECEDE THE HELICOPTERS TO STERILIZE THE OBJECTIVE AREA, THIS WOULD BE COORDINATED BY THE CROWN CREW AS DIRECTED BY 3d GROUP AND 7 AF. IN THE WESTERN AREA, THE EXISTING

 ~~CONFIDENTIAL~~

CROWN ORBIT POSITION WILL BE RETAINED IN THE VICINITY OF PAK SAN DURING DAYLIGHT HOURS. THE TOTAL DAILY HC-130 REQUIREMENT WILL BE 7 WITH 4 CROWN FLIGHTS, 2 OF WHICH WILL BE FLOWN OUT OF TUY HOA WITH 2 OUT OF UDORN WHERE HC-130s WILL BE ROTATED FROM TUY HOA IN 5-DAY CYCLES. IN ADDITION, THERE WILL BE ONE REFUELER ON STRIP ALERT AT BOTH DANANG AND UDORN, PLUS ONE BACKUP AIRCRAFT AT TUY HOA. HOME BASE FOR THE 39th SQUADRON WILL BE TUY HOA WITH STAGING BASES AT UDORN AND DANANG AS REQUIRED TO MEET DAILY COMMITMENTS. AT PRESENT, IT APPEARS THAT WE WILL HAVE NO PROBLEM WITH CYCLING 2 OR 3 AIRCRAFT AT UDORN, BUT, AT DANANG, THE STRIP ALERT AIRCRAFT WILL HAVE TO BE FLOWN IN EACH MORNING AND OUT EACH NIGHT DUE TO LACK OF PARKING SPACE.

DUE TO HIGH TERRAIN AND THE EVER-INCREASING DEFENSE ENVIRONMENT IN LAOS AND NORTH VIETNAM, WE DO NOT PLAN TO REFUEL THE HH-3s IN THAT AREA BECAUSE OF THE MARGINAL REFUELING CAPABILITY ABOVE 8000 FEET AND THE VULNERABILITY OF THE HC 130 BELOW THIS ALTITUDE. THE REFUELER AT UDORN WILL NOT BE A HARD

 CONFIDENTIAL

REQUIREMENT UNTIL THE HH-53Bs ARE FULLY OPERATIONAL.
WE ANTICIPATE REFUELING THE HH-53 AT 10,000 FEET AND
ABOVE, WHICH EFFECTIVELY REMOVES BOTH AIRCRAFT
FROM THE SMALL ARMS ENVIRONMENT. WHEN THE HH-53s
BECOME FULLY OPERATIONAL, WE HAVE PROPOSED THAT
THE HH-3 DETACHMENT BE MOVED TO NAKHOM PHANOM,
WITH ITS PRIMARY MISSION TO BE RECOVERY IN ROUTE
PACKAGES III AND IV IN THE SOUTH CENTRAL SECTOR OF
NORTH VIETNAM, AND ALSO IN THE PANHANDLE OF LAOS.

7
Slide

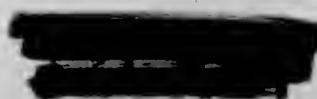
SLIDE #7

CONTINUOUS DAYLIGHT COVERAGE BY THE HH-3s EQUATES
TO 22 FLYING HOURS PER DAY FOR THE HH-3 UNIT AT DANANG.
THIS FURTHER RELATES TO 660 HOURS REQUIRED PER MONTH
WHICH, IN TURN, SUPPORTS OUR STATED POSTURE OF 14
AIRCRAFT AT A 50-HOUR PER MONTH FLYING PROGRAM TO
PROVIDE THIS CAPABILITY.


8
Slide

SLIDE #8 (picture)

THE TESTED FLIGHT ENVELOPE OF THE HH-3E INCLUDED
REFUELING OPERATIONS FROM 2000 TO 10,000 FEET; HOWEVER,
THE ALTITUDES BETWEEN 8 and 10,000 FEET ARE MARGINAL



CONFIDENTIAL

 CONFIDENTIAL

REQUIREMENT UNTIL THE HH-53s ARE FULLY OPERATIONAL.
WE ANTICIPATE REFUELING THE HH-53 AT 10,000 FEET AND
ABOVE, WHICH EFFECTIVELY REMOVES BOTH AIRCRAFT
FROM THE SMALL ARMS ENVIRONMENT. WHEN THE HH-53s
BECOME FULLY OPERATIONAL, WE HAVE PROPOSED THAT
THE HH-3 DETACHMENT BE MOVED TO NAKHOM PHANOM,
WITH ITS PRIMARY MISSION TO BE RECOVERY IN ROUTE
PACKAGES III AND IV IN THE SOUTH CENTRAL SECTOR OF
NORTH VIETNAM, AND ALSO IN THE PANHANDLE OF LAOS.

7
Slide

SLIDE #7

CONTINUOUS DAYLIGHT COVERAGE BY THE HH-3s EQUATES
TO 22 FLYING HOURS PER DAY FOR THE HH-3 UNIT AT DANANG.
THIS FURTHER RELATES TO 660 HOURS REQUIRED PER MONTH
WHICH, IN TURN, SUPPORTS OUR STATED POSTURE OF 14
AIRCRAFT AT A 50-HOUR PER MONTH FLYING PROGRAM TO
PROVIDE THIS CAPABILITY.

8
Slide

SLIDE #8 (pictures)

THE TESTED FLIGHT ENVELOPE OF THE HH-3E INCLUDED
REFUELING OPERATIONS FROM 2000 TO 10,000 FEET; HOWEVER,
THE ALTITUDES BETWEEN 8 and 10,000 FEET ARE MARGINAL

~~CONFIDENTIAL~~

DUE TO THE LOW AIRSPEEDS REQUIRED OF THE HC-130.
NORMALLY, REFUELING WILL TAKE PLACE AT 5000 MSL;
HOWEVER, IF CLOUD COVER IS A FACTOR, REFUELING CAN
BE ACCOMPLISHED WITHOUT DIFFICULTY UP TO 8000 FEET
AND DOWN TO 500 FEET ABOVE THE WATER. BEARING IN
MIND THAT AN HU-16 LANDING UNDER A 500 FOOT CEILING
IS A CALCULATED RISK DUE TO AN INABILITY TO EVALUATE
THE SEA, THE H-3 CAN EFFECTIVELY OPERATE IN ANY
WEATHER CONDITIONS THAT THE HU-16 CAN. ALTHOUGH
THERE MAY BE SITUATIONS WHEN AN EXTENDED MISSION
IS REQUIRED IN THE NORTHERN GULF AND CEILINGS LESS
THAN 500 FEET THROUGHOUT THE AREA PRECLUDE
REFUELING, THIS WOULD ALSO BE A RISKY SITUATION FOR
THE HU-16. IN THESE CASES, WHERE A SERIES OF
CIRCUMSTANCES BUILD UP AGAINST US, THE SURVIVOR
WILL SIMPLY HAVE TO WAIT FOR BETTER CONDITIONS OR
SURFACE RECOVERY. ///

IN THE PHASE III TESTING PROGRAM OF THE HC-130P/HH-3E
TEAM, ONE OF THE TEST OBJECTIVES WAS TO QUALIFY
RESCUE PERSONNEL IN REFUELING OPERATIONS. TWO HIGHLY

~~CONFIDENTIAL~~

CONFIDENTIAL

[REDACTED]

QUALIFIED RESCUE PILOTS WERE ASSIGNED TO PROVIDE
PROGRAM CONTINUITY, DOCUMENT PROCEDURES, AND ALSO
TO PROVIDE THE EXPERIENCE AND KNOW-HOW TO PUT THE
SYSTEM INTO OPERATIONAL USE IN SEASIA. / PHASE III
WAS COMPLETED ON 13 JANUARY 1967, AND A 2200 NM MISSION
WAS DEMONSTRATED BY THE HH-3E USING AIR REFUELING
TECHNIQUES. / THE 2 FLIGHT EXAMINERS WERE FULLY
QUALIFIED DURING THIS PHASE. / THE HH-3 FLIGHT EXAMINER
IS CURRENTLY IN PLACE AT THE 3d GROUP AND THE HC-130P
INSTRUCTOR IS BEING PLACED ON TDY TO THE 3d GROUP IN
EARLY APRIL TO DIRECT THE INITIAL HC-130 REFUELING
OPERATIONS. AS A RESULT OF THE TEST PROGRAM, ARRS
MANUAL 55-4 WAS PUBLISHED IN EARLY FEBRUARY WHICH
THOROUGHLY DETAILS OPERATIONAL REFUELING PROCEDURES.

Safety
February

ALTHOUGH THIS CONCEPT HAS BEEN BRIEFED TO THE
COMMANDER, 3d GROUP, AND HAS BEEN THE SUBJECT OF
MUCH CORRESPONDENCE, NO SINGLE FORMALIZED DOCUMENT
HAS BEEN PUBLISHED WHICH PROVIDES THE DETAIL DESCRIBED
IN THIS BRIEFING. WE, THEREFORE, PLAN TO PUBLISH A

FORMAL CONCEPT OF OPERATIONS AND A SERVICE TEST ✓
PLAN BY 10 APRIL. / ON OR ABOUT 15 APRIL, WE WILL CONVENE
A CONFERENCE OF THE COMMANDERS OF THE UNITS WHICH
WILL BE INVOLVED DURING THE TRANSITION. / THIS CONFERENCE
WILL INCLUDE THE COMMANDERS OF PARRC, 3d GROUP, 31st,
33d, 36th, 37th, AND 39th RESCUE AND RECOVERY SQUADRONS. /
THE CONCEPT OF OPERATIONS AND THE IN-COUNTRY SERVICE
TEST PLAN WILL BE REVIEWED AND THE SUPPORT REQUIRED
DURING AND AFTER THE TEST PERIOD WILL BE DEFINED.

SLIDE #9

9.
SLIDE
THE IN-COUNTRY SERVICE TEST WILL BE CONDUCTED AS
SOON AS POSSIBLE AFTER ARRIVAL OF THE INITIAL CONTINGENT
OF TRAINED AIRCREWS AND EQUIPPED AIRCRAFT. THE
ESTIMATED DATE OF THIS INITIAL CAPABILITY IS 20 APRIL.
ON THAT DATE, THERE WILL BE 8 HC-130P AIRCRAFT AND
7 CREWS IN PLACE WITH 3 REFUELING-EQUIPPED HH-3Es
AND 4 QUALIFIED CREWS. THE SERVICE TEST IS PROPOSED
TO START ON 1 MAY FOR A MAXIMUM OF 30 DAYS WITH A GOAL
OF EARLIER COMPLETION IF POSSIBLE. / IT WILL BE NECESSARY
TO MAINTAIN A FULL HU-16 CAPABILITY DURING THIS PERIOD;

~~CONFIDENTIAL~~

THE COMMANDER, 3d GROUP, PLANS TO RELIEVE THE
HU 16 OF THE COMMAND CONTROL RESPONSIBILITY,
ASSUMING THIS FUNCTION WITH THE HC-130 CROWN AIRCRAFT
BY 30 APRIL. / THIS WILL REDUCE THE NUMBER OF HU-16
HOURS REQUIRED FROM 550 PER MONTH TO 300 DURING MAY.
THE HU-16 WILL BE MAINTAINED ON ALERT AT DANANG
DURING NORMAL OPERATIONS AND FLOWN ON AIRBORNE
ALERT ONLY DURING PEAK STRIKE PERIODS IN NORTH
VIETNAM. /

MISSION PROFILES WILL SIMULATE THOSE PLANNED
FOR TONKIN OPERATIONS AND ALL THE ELEMENTS OF THE
OPERATIONAL ENVIRONMENT THAT CAN BE SIMULATED WILL
BE INJECTED INTO THE TEST PROGRAM TO INSURE REALISM. /
DIVERSIONS TO A SIMULATED RECOVERY AREA WILL BE
DIRECTED BY THE TEST DIRECTOR WITH ACTUAL SCRAMBLE
OF THE BACKUP HC-130 / JOIN-UP PROCEDURES AND ACTUAL
REFUELING OPERATIONS WILL BE CONDUCTED / WHEN THE
SERVICE TEST IS CONCLUDED / LESSONS LEARNED WILL BE
TRANSLATED INTO STANDING OPERATING PROCEDURES AND
ROUTINE GULF OF TONKIN HC-130/HH-3 OPERATIONS WILL
COMMENCE.

~~CONFIDENTIAL~~

THE FOLLOWING CHART SHOWS THE PHASE-IN OF
AIRCRAFT AND QUALIFIED AIRCREWS.

10
Slide

SLIDE #10

THESE ARE ALL BEING PROVIDED FROM COMUS AND DO
NOT INCLUDE ANY CREWS TO BE TRAINED IN-COUNTRY.

THE MANNING AND EQUIPPING OF THE 39th SQUADRON
IS PROCEEDING ACCORDING TO PROGRAM. NO PROBLEMS
ARE ANTICIPATED IN THIS AREA.

UPS
Training

THE HH-3E AIRCREW MANNING OF THE 37th SQUADRON
AT DANANG HAS BEEN DELAYED BECAUSE OF LACK OF A
REFUELING-EQUIPPED TRAINER AT EGLIN. HOWEVER, THIS
HAS BEEN OFFSET BY A SHORTAGE OF HH-3E AIRFRAMES.
IN JUNE, THERE IS SUBSTANTIAL IMPROVEMENT IN BOTH
AIRFRAMES AND AIRCREWS WITH SUFFICIENT DEPTH TO
ABSORB A SUBSTANTIAL MISSION LOAD. ALTHOUGH THIS
CHART SHOWS 5 HH-3Es AVAILABLE BY END APRIL, ONLY
4 WILL BE REFUELING-EQUIPPED. THE PHASE-IN SHOWN
DOES NOT CONSIDER THE DIVERSION OF H-3 AIRCRAFT FOR
THE PARIS AIR SHOW. THE SIKORSKY MODIFICATION TEAM

May 1968
2

~~SECRET~~

WILL DEPLOY SHORTLY TO BANGKOK TO MODIFY THE H-3s
CURRENTLY IN SEASIA. / SIKORSKY AIRCRAFT ESTIMATES THE
TEAM IN PLACE AND READY BY 15 APRIL WITH A CAPABILITY
TO MODIFY 2 AIRCRAFT EACH 30 CALENDAR DAYS. / BASED
ON THESE ESTIMATES, THERE WILL BE AN AVERAGE OF 7
EQUIPPED H-3s AT DANANG IN MAY AND 9 IN JUNE, REMAINING
AT THAT LEVEL UNTIL ATTRITION AIRCRAFT ARE RECEIVED. /
AN ADDITIONAL H-3 MAY BE GAINED BUT DELIVERY INFORMATION
IS NOT YET AVAILABLE. (THIS IS THE HH-3 THAT WAS DAMAGED
IN DANANG HARBOR IN JANUARY AFTER BEING BLOWN ASHORE
FOLLOWING A PRECAUTIONARY LANDING DUE TO TRANSMISSION
FAILURE.) THIS AIRCRAFT WAS PLACED IN REPAIR AT NORTH
ISLAND NAVAL AIR STATION, SAN DIEGO, BUT THE REPAIR
HAS BEEN DETERMINED TO BE BEYOND THE CAPABILITY OF
THAT FACILITY. WRAMA HAS BEEN INFORMED AND REQUESTED
TO TAKE ACTION TO HAVE THE AIRCRAFT AIRLIFTED TO
SIKORSKY AIRCRAFT FOR REBUILDING. BEST ESTIMATES FOR
RETURN OF THIS AIRCRAFT TO ACTIVE USE IS 6 MONTHS AFTER
RECEIPT BY SIKORSKY. //

IN EARLY FEBRUARY WE ADVISED YOUR HEADQUARTERS
OF THE REQUIREMENT FOR REPROGRAMMING HH-3 ATTRITION

~~SECRET~~

CONFIDENTIAL
NOFORN RELEASES

~~CONFIDENTIAL~~

AIRCRAFT AND ACTION WAS TAKEN TO FORWARD SUPPORTING RECOMMENDATIONS TO AIR FORCE. WE HAVE BEEN ADVISED VIA TELECON THAT GENERAL SWANCUTT HAS THE PROBLEM UNDER CONSIDERATION AT THE PRESENT TIME WITH A DECISION EXPECTED MOMENTARILY. IF THIS COMES TO PASS, A MUCH ROSIER PICTURE WILL EMERGE. ON THE OTHER HAND, THE PICTURE CAN LOOK MUCH DIMMER IN THE MAY AND JUNE PERIOD IF 2 HH-3s ARE DIVERTED FROM THE PROGRAM TO PARTICIPATE IN THE PARIS AIR SHOW, AS HAS BEEN PROPOSED.

WE SHOW ZERO REFUELING QUALIFIED CREWS FOR THE HH 3 DETACHMENT AT UDORN FOR REASONS PREVIOUSLY EXPLAINED. THE LAST LINE SHOWS THE LATEST ESTIMATED PHASE-IN OF THE HH-53 DETACHMENT. MANNING FOR THE HH-53 PROGRAM IS ON SCHEDULE.

*Line 3
at
UDORN*

AS TO OUR CAPABILITY TO SUPPORT HU-16 OPERATIONS DURING THE SERVICE TEST PERIOD AND BEYOND, IF REQUIRED, THE PERSONNEL PICTURE APPEARS FAVORABLE.

SLIDE #11

PER. IT WILL BE NECESSARY TO AUGMENT THE DECREASING RESOURCES OF THE 37th SQUADRON'S HU-16 ELEMENT UNTIL

~~SECRET~~

~~CONFIDENTIAL~~

~~SECRET~~

THE HH-3 PROGRAM, TDY PERSONNEL ARE BEING FURNISHED TO BRING THE 31st AND 33d SQUADRONS UP TO 100% MANNING AND RESCUE AND MAC PERSONNEL STAFFS ARE WORKING TO PROVIDE 100% AIRCREW AND GROUND SUPPORT PCS MANNING BY THE END OF JUNE. AIR FORCE HAS AUTHORIZED A 65 HOUR PROGRAM FOR BOTH THESE UNITS THROUGH FISCAL 4/68, WHICH WILL PROVIDE AN ADDITIONAL 2.5 AIRCREWS AND 32 GROUND SUPPORT PERSONNEL. AGAINST THE 14 HU-16 AIRCREWS AUTHORIZED, THE NUMBER OF AIRCREWS REQUIRED IN DIRECT SUPPORT OF SEASIA WILL BE 6 IN MAY, REDUCING TO 4 IN JUNE AND CONTINUING AT THAT LEVEL UNTIL COMPLETE PHASE-OUT. NOTE THAT ON THE LAST LINE OF THE CHART ADDITIONAL CREWS CAN BE MADE UP IN THE MONTHS INDICATED BY TDY OF INDIVIDUALS BETWEEN THE SQUADRONS. THE CAPABILITIES OF THE 31st AND 33d SQUADRONS TO SUPPORT THIS REQUIREMENT AGAINST THE PHASE-IN OF THE H-3s ARE SHOWN HERE.

SLIDE #12

12
SLIDE

THE HC-130 IS NOT INCLUDED SINCE THE CAPABILITY DURING THIS PERIOD IS FAR IN EXCESS OF THE REQUIREMENT.

~~SECRET~~

~~CONFIDENTIAL~~
~~SECRET~~

~~SECRET~~

THE TWO HORIZONTAL LINES AT THE TOP OF THE CHART REFLECT THE CURRENT LEVEL OF HU-16 SUPPORT REQUIRED UNDER THE EXISTING CONCEPT AND ALSO TO THE HH-3E FLYING HOURS REQUIRED TO IMPLEMENT THE NEW CONCEPT.

DURING MAY, THE HH-3 AIRCRAFT WILL HAVE 200 HOURS OF CAPABILITY TO PERFORM THE SERVICE TEST AND/OR TO MEET OTHER MISSION REQUIREMENTS. / THE 300-HOUR HU-16 REQUIREMENT CAN BE MET BY THE COMBINED 695-HOUR CAPABILITY COMPUTED FOR THE 31st, 33d, AND 37th SQUADRONS, WITHOUT DEGRADATION OF THEIR MISSION. / ANTICIPATING 2 PRODUCTION HH-3s IN EARLY MAY AND 2 IN-COUNTRY MODIFIED HH-3s BY LATE MAY, 400 HOURS OF HH-3 TIME CAN BE GENERATED WHICH WILL REQUIRE ONLY 180 HOURS OF HU-16 TIME OF THE 585 AVAILABLE. IF A LARGE SCALE MISSION DEVELOPS IN THE 31st OR 33d AREAS, HC-130 AUGMENTATION CAN BE PROVIDED FROM THE 36th AND 79th SQUADRONS. THE RED DIAMOND MARKER RELATES TO THE IMPACT OF USING HH-3s FOR THE PARIS AIR SHOW. IF THIS CONTINUES AS A REQUIREMENT, THE REFUELABLE HH-3 HOURS WILL BE REDUCED TO 150 HOURS IN MAY AND TO 300 HOURS IN JUNE, WITH 250 HU-16 HOURS REQUIRED IN JUNE

~~SECRET~~

~~CONFIDENTIAL~~
~~WORKING PAPERS~~

~~SECRET~~

INSTEAD OF THE . . . OTHERWISE HAVE BEEN,
REQUIRED.

SUPPORT WILL BE REQUIRED TO CONTINUE AT THIS LEVEL UNTIL HH-3E ATTRITION AIRCRAFT ARE PROVIDED. IF, FOR EXAMPLE, IN THE JULY COLUMN, 2 REPLACEMENT HH-3s SHOULD BE MADE AVAILABLE, THE HU-16 HOURS WOULD BE DECREASED TO LESS THAN 100 HOURS PER MONTH AND ELIMINATED WHEN THE SECOND PAIR OF ATTRITION HH-3s IS RECEIVED. THE FLYING HOURS FOR THE 14th AIRCRAFT ARE NOT SHOWN ON THE LAST BAR GRAPH. THIS IS THE AIRCRAFT AT NORTH ISLAND WHICH WILL BE SHIPPED TO SIKORSKY AIRCRAFT FOR REBUILDING.

TO SUMMARIZE THIS CHART AND THE ONE IMMEDIATELY PRIOR TO THIS, RESCUE EXPECTS TO HAVE THE HU-16 RESOURCES, BOTH PERSONNEL AND AIRCRAFT, TO MEET ALL KNOWN REQUIREMENTS IN MAY, JUNE, AND THEREAFTER, PROVIDING H-3 AIRCRAFT ARE RECEIVED AS PROGRAMMED. UPON RECEIPT OF THE 4 ATTRITION AIRCRAFT, THE HU-16 WILL BE ELIMINATED FROM THE SEASIA TDY REQUIREMENT AND THE TOTAL MISSION ASSUMED BY THE HC-130/H-3 TEAM. WITH AIR STAFF SUPPORT, THIS CAN BE ACCOMPLISHED BY 30 SEPTEMBER, AT THE LATEST.

~~SECRET~~

CONFIDENTIAL
~~NO FORN DISSEM~~

~~SECRET~~

SLIDE #13 (BLANK)

AS POINTED OUT EARLIER, THE SELECTION OF A BED DOWN LOCATION FOR THE HC-130 FORCE HAS BEEN IN A CONSTANT STATE OF FLUX OVER THE PAST YEAR AND A HALF. THE MAJOR PROBLEM HAS BEEN THE SELECTION OF A MAIN OPERATING BASE. THE ORIGINAL PROPOSAL WAS TO FORM TWO UNITS OF HC-130s -- 6 AT UDORN AND 5 AT DANANG. NEITHER OF THESE BASES CAN PROVIDE THE REQUIRED HEAVY MAINTENANCE SUPPORT OR ADEQUATE RAMP SPACE. AS A RESULT, THESE ALTERNATE BASES IN SEASIA WERE, AT ONE TIME OR ANOTHER, CONSIDERED FOR SELECTION AS AN MOB. (PAUSE)

SLIDE #14

U TAPAO

NAM PHONG

CAM RAHN BAY

DON MUANG

TUY HOA

AGAIN, NONE OF THESE BASES CAN PROVIDE THE NECESSARY HEAVY MAINTENANCE SUPPORT THAT IS REQUIRED OF AN MOB. A CINCPACAF MESSAGE EARLIER THIS MONTH STATES THAT

~~SECRET~~

~~WORKING PAPERS~~

~~SECRET~~

AN MOB IN SEASIA IS NOT AVAILABLE AND THESE BASES OUTSIDE
OF SEASIA ARE NOW UNDER CONSIDERATION AS MOBS.

SLIDE #15

CLARK AB

CCK TAIWAN

TACHIKAWA AB

NAHA

CURRENTLY, THE FIRST 3 BASES SHOWN ARE SERVING AS MOBS
FOR TAC C-130s.

SLIDE #15A

THIS CHART DEPICTS THE ROUND TRIP FLYING HOURS
THAT WOULD BE REQUIRED IN DEPLOYING THE AIRCRAFT
BETWEEN THE FOB AT TUY HOA AND THE 4 MOB BASES UNDER
CONSIDERATION. FROM A PURE FLYING HOUR CONSIDERATION,
ONLY CCK AND CLARK APPEAR ATTRACTIVE AS AN MOB.
CLARK OFFERS A FURTHER ADVANTAGE IN THAT ROTATIONAL
HC-130s BETWEEN CLARK AND RVN CAN EASILY BE UTILIZED
TO MEET SOME OF THE DUCKBUTT REQUIREMENTS ALONG
THIS ROUTE. WITH TUY HOA AS THE FOB AND ONE OF THESE
OTHER BASES SERVING AS THE MOB FOR ALL 11 AIRCRAFT, THE

~~CONFIDENTIAL~~

SLIDE #16

MANPOWER ALIGNMENT WILL BE AS DEPICTED ON THIS CHART. MANNING AT THE FOB INCLUDES MAINTENANCE TURN-AROUND CAPABILITY.

AS YOU ARE AWARE, RESCUE SUBMITTED A PROPOSAL TO MAC TO CONVERT THE 31st SQUADRON AT CLARK AB TO 4 HC-130s WITH 7 HC-130s ASSIGNED TO THE 39th SQUADRON AT TUY HOA AS AN FOB. UNDER THIS PROPOSAL, ALL 11 AIRCRAFT WOULD BE UNDER THE CONTROL OF THE 3d GROUP, AND THE 31st SQUADRON WOULD BE TASKED TO PROVIDE ALL HC-130 HEAVY MAINTENANCE AND PHASE INSPECTIONS. YOUR STAFF HAS ADVISED THAT TO ESTABLISH THE 31st SQUADRON AS AN MOB, LOGISTIC REASONS REQUIRE THAT ALL 11 AIRCRAFT BE ASSIGNED TO THIS SQUADRON. THIS, IN ESSENCE, WILL MAKE THE 39th SQUADRON AT TUY HOA AN OPERATIONAL SQUADRON, WHILE MAINTENANCE SUPPORT WOULD BE THE PRIMARY MISSION OF THE 31st SQUADRON. WE CONCUR IN THIS CONCEPT AND, IF APPROVED, IT WILL RESULT IN THE FOLLOWING ADVANTAGES TO MAC AND RESCUE:

Slide #17

~~SECRET~~

~~WORKING DRAFT~~
~~CONFIDENTIAL~~

~~SECRET~~ CONFIDENTIAL

SLIDE #17

IT WILL REDUCE NONPRODUCTIVE FLYING TIME TO AN ACCEPTABLE LEVEL, THUS PROVIDING MORE PRODUCTIVE HOURS TO SEASIA SUPPORT. CURRENTLY, THE FLYING HOURS EXPENDED FOR FERRY TO MAINTENANCE FACILITIES IN JAPAN APPROXIMATE 12% OF PROGRAMMED FLYING HOURS. SOME OF THESE NONPRODUCTIVE FLYING HOURS COULD BE USED FOR ORBIT MISSIONS BY THE 31st SQUADRON WHICH WOULD BE SUPPLEMENTED BY 36th SQUADRON AIRCRAFT, AS REQUIRED, AND AS IS CURRENTLY BEING DONE ON A ROUTINE BASIS. EACH OF THE OTHER BASES CONSIDERED WILL ALSO REQUIRE MORE NONPRODUCTIVE FLYING HOURS THAN CLARK.

SECOND, IT WILL ESTABLISH A MAINTENANCE FACILITY MANNED BY PERSONNEL ON STABILIZED NORMAL TOURS OF DUTY.

THIRD, IT PROVIDES FOR A POSTWAR BED DOWN OF HC-130 AIRCRAFT IN PLACE AND OPERATIONAL AT THE CESSATION OF HOSTILITIES. IN ADDITION, IT AVOIDS THE PHASE-OUT OF 31st SQUADRON FIXED-WING AIRCRAFT TO HELICOPTERS AT THE END OF FISCAL 4/68.

~~SECRET~~ 11-
IT ALSO TAKES ADVANTAGE OF THE RECENTLY COMPLETED HC-130 NOSE DOCK AT CLARK AB. IN ADDITION, A NEW PARKING RAMP IS TO BE COMPLETED THIS MONTH. BOTH OF THESE FACILITIES COULD BE LOST TO OTHER C-130 OPERATIONS IF NOT PROGRAMMED FOR HC-130s.

NEXT, IT RELIEVES LOGISTIC SUPPORT REQUIREMENTS IN SEASIA AND REDUCES MANPOWER REQUIREMENTS IN SEASIA THUS ALLEVIATING CRITICAL MANPOWER CEILING PROBLEMS.

WE HAVE QUERIED CINCPACAF AS TO AVAILABILITY OF CLARK AB AS WELL AS THE OTHER 3 BASES AS AN MOB AND SOLICITED THEIR RECOMMENDATIONS. AN EARLY REPLY FROM PACAF IS EXPECTED.

TO SUMMARIZE MY BRIEFING AND TO OUTLINE THE ACTIONS NECESSARY TO REACH OUR STATED OBJECTIVE IN THE SHORTEST POSSIBLE TIME PERIOD, WE MUST FIRST:

SLIDE #18

PUBLISH THE FORMAL CONCEPT OF OPERATIONS AND SERVICE TEST PLAN AS SOON AS POSSIBLE BUT NOT LATER THAN 10 APRIL. THESE TWO DOCUMENTS WILL BE ISSUED AS APPENDICES TO ARRS PROGRAMMING PLAN 582.

~~SECRET~~ 11-
CONFIDENTIAL
HAWAII 34200

~~SECRET~~

NEXT, CONVENE A CONFERENCE IN THE WESTERN PACIFIC AND BRIEF THE COMMANDERS CONCERNED ON THE CONCEPT, THE SERVICE TEST PLAN, AND PROVIDE DETAILS OF THE PARTICIPATION REQUIRED OF EACH UNIT DURING THE TRANSITION PERIOD AND BEYOND.

THIRD, WE MUST BRIEF THE CREWS THOROUGHLY AND USE THE TIME BETWEEN 20 APRIL AND 1 MAY AS A GET-READY PERIOD, FOR THE SERVICE TEST.

WE MUST ALSO INSURE THAT ADEQUATE TDY PERSONNEL ARE IN PLACE AT THE 31st AND 33d SQUADRONS BY 20 APRIL TO PERMIT THESE SQUADRONS TO ASSUME THE MISSION LOAD DURING THE SERVICE TEST PERIOD AND BEYOND, IF NECESSARY.

CONCURRENTLY, WE WILL RELIEVE THE HU-16 OF THE COMMAND AND CONTROL FUNCTION IN THE GULF OF TONKIN. IN ACTUALITY, IT IS PLANNED TO ASSUME 50% OF THE MISSION LOAD BY 15 APRIL, BUILDING UP TO A COMPLETE TAKE-OVER BY THE END OF THE MONTH --

AND ON THE FIRST OF MAY START THE SERVICE TEST FOR A 30-DAY PERIOD OR LESS, DEPENDING ON RESULTS.

Slide #11

~~SECRET~~

RECEIVED 1977
MAY 1 1977

~~SECRET~~

SLIDE #19

ACTION MUST BE TAKEN WITH PACAF TO ESTABLISH A FIRM MOB AND FORMULATE PLANS FOR AN ORDERLY PHASE-IN AS SOON AS PRACTICAL.

THE SERVICE TEST WILL BE COMPLETED BY END MAY WHICH WILL PERMIT US TO PLACE THE HC-130/HH-3 TEAM IN OPERATIONAL USAGE IN THE GULF OF TONKIN.

PER
Planning
BY MID-JUNE, A PLAN SHOULD BE PUBLISHED FOR ESTABLISHING AND PHASING IN THE PERSONNEL AND RESOURCES NECESSARY TO MAINTAIN THE HC-130Ps.

PERSONNEL ACTIONS MUST ALSO BE TAKEN TO REPLACE THE TDY PERSONNEL AT THE 31st AND 33d SQUADRONS WITH PCS ASSIGNMENTS BY END JUNE.

CPS
HL-16
Extension
ALSO, BY END JUNE, THE HU-16s WILL BE PHASED-OUT OF THE 37th SQUADRON. SUFFICIENT COMMAND SUPPORT AIRCRAFT WILL BE PROVIDED TO THE 31st AND 33d TO INSURE AN ADEQUATE NUMBER OF AVAILABLE AIRFRAMES AS A BACKUP FOR GULF OF TONKIN OPERATIONS THROUGHOUT THE PERIOD WHICH, AGAIN HOPEFULLY, WILL BE TERMINATED BY THE END OF SEPTEMBER.


SLIDE #20

CONCLUSIONS

BASED ON THE FOREGOING DISCUSSION, IT IS CONCLUDED
THAT:

1 IF RESCUE RECEIVES THE ADDITIONAL ATTRITION AIRCRAFT
REQUESTED, THE HC-130P/HH-3E TEAM WILL BE CAPABLE OF
ASSUMING THE FULL ACR MISSION IN THE GULF OF TONKIN BY
30 SEPTEMBER. A PARTIAL HU-16 REQUIREMENT AT DANANG
WILL EXIST UNTIL THAT TIME.

2 IF ATTRITION AIRCRAFT ARE NOT RECEIVED DURING THIS
PERIOD, THE HU-16 REQUIREMENT WILL CONTINUE UNTIL SUCH
TIME AS HH-3 STRENGTH AT DANANG CAN BE BROUGHT UP TO
14 UE AIRCRAFT.

IF RESCUE HH-3s ARE TASKED TO PARTICIPATE IN THE
PARIS AIR SHOW, IT WILL RESULT IN HU-16s BEING REQUIRED
AT THE 300-HOUR PER MONTH LEVEL UNTIL THE HELICOPTERS
ARE EVENTUALLY IN PLACE AT DANANG.

3 PRODUCTION AIRCRAFT MUST BE DELIVERED IN
ACCORDANCE WITH PRESENT SCHEDULES IF THE EARLY INITIAL
CAPABILITY IS TO BE ACHIEVED.

~~CONFIDENTIAL~~

4. AND LAST, AN MOB FOR THE HC-130P. OF THE 39th SQUADRON MUST BE DETERMINED AT THE EARLIEST POSSIBLE DATE. THIS IS NECESSARY IN ORDER THAT TIMELY PERSONNEL AND MATERIEL PROGRAMS MAY BE IMPLEMENTED.

SLIDE #21

RECOMMENDATIONS

1. SINCE ACHIEVING OUR OBJECTIVE DEPENDS LARGELY UPON RECEIVING REPLACEMENT HH 3Es, WE RECOMMEND COMMANDER MAC'S PERSONAL ASSISTANCE IN OBTAINING APPROVAL OF THE MAC REQUEST FOR ATTRITION AIRCRAFT.
- 1 SECONDLY, TO AVOID ADDITIONAL DELAYS IN ACHIEVING THE HC-130/H-3 CAPABILITY IN SEASIA, WE RECOMMEND FURTHER EFFORTS TO EXEMPT RESCUE HH-3Es FROM PARTICIPATION IN THE PARIS AIR SHOW.
- 3 AND LAST, WE RECOMMEND THAT AN HC-130P MOB BE DETERMINED AT THE EARLIEST POSSIBLE DATE.

"OVERT"

~~CONFIDENTIAL~~
~~WORKING PAPERS~~

HQ AC

SUBJECT

E AIR FORCE
RECOVERY SERVICE (MAC)
ST. ILLINOIS 62225

CONFIDENTIAL

10 July 67

SLIDE # 1 COMBAT AIRCRAFT RECOVERY IS A UNIQUE AND DISTINCT BRANCH OF THE UNITED STATES AIR FORCE AND MORE SPECIFICALLY AMERICAN RESCUE AND RECOVERY SERVICE. PRIOR TO AMERICAN RESCUE AND RECOVERY SERVICE COMMITMENT TO SOUTH EAST ASIA, A COMBAT AIRCRAFT RECOVERY CAPABILITY WAS PRACTICALLY NON-EXISTENT. THE ONLY AID CAPABILITY THAT EXISTED AT THAT TIME WAS PROVIDED BY EXTREMELY SHORT RANGE HH-43 LOCAL BASE RESCUE HELICOPTERS, LIMITED TO A RADIUS OF ACTION OF TEN FROM THEIR STAGING BASES AND BY HU-16 AMERICAN AIRCRAFT WHICH PROVIDED ONLY AND RECOVERY CAPABILITY IN THE OFF SHORE GULF OF TONKIN AREA. THESE AIRCRAFT COULD NOT PROVIDE A TRUE COMBAT AIRCRAFT RECOVERY CAPABILITY FOR THE TYPE OF TACTICAL MISSIONS BEING FLOWN IN SOUTH EAST ASIA. IN ANY RESCUE/RECOVERY MISSION, TIME FROM bailout TO RECOVERY IS CRITICAL, A BOMBER CREW MEMBERS CHANCES OF SURVIVAL ARE DIRECTLY RELATED TO THE SPEED AT WHICH A RECOVERY VEHICLE COULD ARRIVE ON SCENE AND AFFECT RECOVERY. IN SOUTH EAST ASIA OPERATIONS ANALYSIS OF RECOVERY OPERATIONS EMPHASIZES THE CRITICALITY OF MINIMIZING THE TIME BETWEEN BAILOUT AND RECOVERY. FURTHER, THIS ANALYSIS POINTS OUT THAT THE DEGREE OF SUCCESS OF RECOVERY RESPONSE DEPENDS RAPIDLY WHEN THE TIME ELEMENT IS

PROJECT CORONA HARVEST

CONFIDENTIAL

EXTENDED

DO NOT DESTROY

CATALOGED

C.H. #

000-5826

MIRAC

Date

303

ATCH 6

23 Dec 67 by MCL/K
by MCL/K
Produced
by MCL/K
Copy 1 of 1

~~SECRET~~ CONFIDENTIAL

SLIDE # 2. AS CAN BE SEEN ON THIS SLIDE, DEPICTING THE LOCATION OF DOWNED AIRMEN AND SUCCESSFUL RECOVERIES, A LONG-RANGE HIGH SPEED AIRCRAFT RECOVERY AIRCRAFT OR SERVICE CAPABLE OF PENETRATING DEEP INTO, AND SURVIVING IN HOSTILE AREAS/ENVIRONMENT IS REQUIRED, IN ORDER TO PROVIDE A TRUE COMBAT AIRCRAFT RECOVERY CAPABILITY. WITH THE INTRODUCTION OF LONG-RANGE HC-130 AIRCRAFT, AND HH-3E/HH-53E HELICOPTERS INTO THE ARMS INVENTORY, A LIMITED BUT HIGHLY EFFECTIVE COMBAT AIRCRAFT RECOVERY CAPABILITY WAS BORN. TO OVERCOME THE RANGE OF ACTION, ALTITUDE AND PAYLOAD LIMITATIONS OF THE HH-3E/HH-53E HELICOPTERS AND PROVIDE A MUCH MORE EFFECTIVE SYSTEM TO PERFORM THE RECOVERY MISSION, HQ ARS ENVISIONED AND DEVELOPED THE CONCEPT SLIDE # 3. OF INFLIGHT REFUELING OF HELICOPTERS FOR INCREASED RANGE AND GREATER FLEXIBILITY OF OPERATIONS. SLIDE # 4. THE FEASIBILITY OF HELICOPTER INFLIGHT REFUELING WAS PROVEN ON MAY 31 1967 WHEN TWO ARS HH-3E HELICOPTERS SUPPORTED BY FOUR RESCUE HC-130P REFUELERS FLEW 3,510NM FROM NEW YORK'S FLOYD BENTLEY NAVAL AIR STATION TO LE BOURGET FIELD PARIS FRANCE NON-STOP, REQUIRING 9 INFLIGHT REFUELINGS PER HELICOPTER ENROUTE. THIS FLIGHT WAS ACCOMPLISHED IN 30 HRS 46MIN FOR A AVERAGE GROUND SPEED OF 114 KNOTS AGAINST PREDOMINATE HEAD WINDS.

~~SECRET~~ CONFIDENTIAL

CONFIDENTIAL

WITH THIS NEWLY ACQUIRED LONG-RANGE CAPABILITY AND THE INTRODUCTION OF THE
LONG RANGE, HEAVY LIFT HH-53B HELICOPTER IN THE ARRS INVENTORY AS OF FY 1/68,
ARRS HAS DEVELOPED A CAPABILITY AND CONCEPT OF OPERATIONS TO EFFECTIVELY
PERFORM THE COMBAT AIRCREW RECOVERY MISSION NOT ONLY IN SOUTH EAST ASIA
BUT IN ANY OTHER GEOGRAPHICAL AREA OF THE WORLD IN SUPPORT OF CONTINGENCY
OPERATIONS. TODAY I WOULD LIKE TO DISCUSS THIS CAPABILITY AND CONCEPT OF
OPERATIONS IN ORDER TO PROVIDE YOU, THE USER, AN INSIGHT INTO THE NEWLY
ACQUIRED ARRS CAPABILITY TO SUPPORT YOUR CONTINGENCY OPERATIONS. TO DO
THIS MY BRIEFING WILL CONSIST OF THE FOLLOWING: SLIDE # 5. FIRST:
AIRCRAFT CAPABILITIES, AND COMBAT CONFIGURATION. SECOND: CONCEPT OF
OPERATIONS TO INCLUDE MISSION FUNCTIONS AS RELATED TO CONTINGENCY OPERATIONS
IN GENERAL, AND A VIEW OF HOW THIS MISSION WOULD BE PERFORMED IN SUPPORT
OF COMUSMACV PLAN 632 PHASE II AND PHASE III OPERATIONS. THIRD:
OPERATIONS OVER/IN HOSTILE AREAS TO INCLUDE LATERAL SUPPORT FROM TACTICAL
RESCORT AND RESCAP AIRCRAFT FOURTH: AN AIR FORCE TRAINING FILM "RESCUE
AND YOU IN SOUTH EAST ASIA" WHICH AS OF THIS DATE HAS NOT BEEN RELEASED
BY ARRS. THE SEGMENT OF THIS FILM WHICH WILL BE SHOWN TODAY DEPICTS
A TYPICAL INTEGRATED COMBAT AIRCREW RECOVERY MISSION AS CURRENTLY BEING
FLOWN IN SEASIA, AND WITH LITTLE DIFFICULTY YOU CAN TRANSLATE THRU

CONFIDENTIAL

~~CONFIDENTIAL~~ CONFIDENTIAL

CONCEPT INTO YOUR OPERATIONAL REQUIREMENTS. YOU WILL NOTICE IN THIS
FILM THAT INFLIGHT REFUELING IS NOT MENTIONED. THIS IS DUE TO THE FACT
THAT AT THE TIME THIS FILM WAS PRODUCED, INFLIGHT REFUELABLE HELICOPTERS
WERE NOT INTRODUCED INTO THE SOUTH EAST ASIA ARMS INVENTORY, WHICH GIVES
YOU A PRETTY FAIR IDEA OF HOW NEW THIS CAPABILITY REALLY IS. SLIDE # 6
THE HC-130 P AIRCRAFT HAS A RANGE OF 4500 NM AND TAS 290. CARRIES A 10
MAN CREW WHICH INCLUDES 2 PARARESCUERS. THIS AIRCRAFT IS EQUIPPED WITH
ARMOUR PLATING PROTECTION FOR CRITICAL AIRCRAFT SYSTEMS AND 10 AIRCREW
POSITIONS. THE AIRCRAFT CONFIGURATION IN ITS COMBAT MISSION INCLUDES:
SLIDE 6A FULTON SURFACE-TO-AIR RECOVERY SYSTEM, THIS SYSTEM HAS NOT
BEEN EMPLOYED IN SEASIA RECOVERY MISSION PRIMARILY BECAUSE OF THE EXTREMELY
DENSE FORESTED/JUNGLE ENVIRONMENT WHICH WOULD INTERFERE WITH AND PRECLUDE
SUCCESSFUL SURFACE TO AIR RECOVERY OPERATIONS. IN-FLIGHT REFUELING SYSTEM
FOR THE HH-3E/HH-53B HELICOPTERS. ELECTRONIC HOMING, TRACKING AND COMMAND/
CONTROL COMMUNICATIONS EQUIPMENT. TO PROVIDE NAV. ASSISTANCE TO FIGHTER
AIRCRAFT AND PERFORM THE SEARCH LOCATION AND AIRBORNE SAC MISSION COORDINATOR
MISSIONS. FLOATATION AND SURVIVAL AERIAL DELIVERY KITS.

~~CONFIDENTIAL~~

CONFIDENTIAL

CONFIDENTIAL

TWO INTERNAL RANGE EXTENSION/FUEL AUGMENTATION TANKS CAPACITY 1800 GALS EACH. SLIDE 7. HH-3E HELICOPTER HAS A NORMAL RANGE OF 700 NM WITHOUT REFUELING. THIS RANGE IS EXTENDED WITH INFIGHT REFUELING. THE NORMAL CRUISE SPEED IS 110-120 KTS WITH A 140 KTS DASH SPEED CAPABILITY. OPTIMUM ALTITUDE FOR REFUELING OPERATIONS IN CONJUNCTION WITH HC-130P AIRCRAFT IS 8000' DENSITY ALTITUDE. COMBAT CONFIGURATION FOR THIS HELICOPTER IS: ARMOR PROTECTION ON VITAL COMPONENTS AND FOR PILOT AND COPILOT. 3 M-60D MACHINE GUNS WITH 750 ROUNDS OF AMMUNITION PER WEAPON. SELF SEALING FUEL TANKS AND RANGE EXTENSION TANKS. AIR-TO-AIR REFUELING PROBE AND SYSTEMS. SLIDE 7B. RESCUE HOIST EQUIPPED WITH FOREST PENETRATOR. 1 FLIGHT MECHANIC WHO OPERATES THE RESCUE HOIST AND ASSISTS THE PARASCOUTMAN IN RECOVERY OPERATIONS. SLIDE 8. HH-53B HELICOPTERS NORMAL RANGE OF 625 NM WITHOUT INFIGHT REFUELING. THIS RANGE IS EXTENDED WITH INFIGHT REFUELING. THE NORMAL CRUISE SPEED IS 130-150 KTS. WITH A 170 KTS DASH SPEED CAPABILITY. THIS HELICOPTER WAS REFUELED AT ALTITUDES UP TO 14000' DENSITY ALTITUDE DURING CURRENT TESTS. COMBAT CONFIGURATION OF THIS AIRCRAFT IS BASICALLY THE SAME AS THE HH-3E. HOWEVER, THIS HH-53 IS EQUIPPED WITH THREE GAU-2E MINIGUNS IN LIEU OF THE M-60D. EACH WEAPON HAS 3000 ROUNDS OF AMMUNITION/

CONFIDENTIAL

[REDACTED]

RATE OF FIRE 4000 RPM. 4 CREW: FLIGHT MECHANIC WHO OPERATES THE RESCUE
HOIST AND ASSISTS THE PARACHUTER IN RECOVERY OPERATIONS. SLIDE 9.

HH-3E/F HELICOPTERS NORMAL RANGE OF ACTION IS 100 NM. THIS AIRCRAFT IS
EQUIPPED WITH: THE RESCUE HOIST. FIRE SUPPRESSION KIT FOR LAR AND
IMMEDIATE AREA CAPABILITY. THIS HELICOPTER DOES NOT HAVE ANY MEDIUM-
LONG RANGE RECOVERY CAPABILITY. DURING PHASE II OPERATIONS ITS FUNCTIONS
WILL BE LIMITED TO LAR ACTIVITIES. AT THE FORWARD OPERATING BASE IN
THE OBJECTIVE AREA THE HELICOPTER SHOULD BE RESTRICTED TO THE LAR MISSION
THE INTEGRATION OF THE VARIOUS CAPABILITIES AVAILABLE IN THIS MIXED FORCE,
ALLOWS A FLEXIBILITY OF OPERATIONS CAPABLE OF RESPONDING TO AND EFFECTIVELY
PERFORMING IN MOST SEARCH, RESCUE AND COMBAT AIRCRAFT RECOVERY ENVIRONMENTS,
DEPLOYMENT OF SAR FORCES: PRIOR TO THE DEVELOPMENT OF INFIGHT REFUELING
CAPABILITY HH-3E HELICOPTERS HAD TO BE PARTIALLY DISASSEMBLED AND AIR LIFTED
TO THE THEATER OF OPERATIONS. ONCE ON STATION, AN AVERAGE OF 3 DAYS WAS
REQUIRED TO REASSEMBLE THE HELICOPTER. THEREFORE, IN ORDER TO ARRIVE
AT THE STAGING BASE AND BECOME OPERATIONALLY READY ON X DAY AIRLIFT MUST
DELIVER THESE HELICOPTERS IN PHASE II X-3 DAY. NOW WITH INFIGHT REFUELING
THE HH-3E/HH-53B HELICOPTERS AND REFUELERS COULD SLIDE 11. BE DEPLOYED TO
THE SPECIFIED STAGING BASES ON DATES, TIMES AND ROUTE COINCIDING WITH [REDACTED]

[REDACTED]

TACTICAL FIGHTER DEPLOYMENTS. THE MC-130P/HH-3A/HH-53B TEAMS WOULD BE FLIGHT PLANNED TO DEPART THEIR ENROUTE/CREW REST STATIONS AT SPECIFIED INTERVALS IN ORDER TO PROVIDE MAXIMUM RESCUE COVERAGE FOR DEPLOYING TACTICAL AIRCRAFT ENROUTE TO THE STAGING BASE. ON ARRIVAL ON LOCATION THESE SAR FORCES WOULD BE OPERATIONALLY READY, FOLLOWING CREW REST TO ASSUME THE ASSIGNED MISSIONS. THE HH-43B LOCAL BASE RESCUE HELICOPTER STILL REQUIRES AIRLIFT ON X-3 DAY IN ORDER TO ARRIVE ON STATION AND BECOME OPERATIONALLY READY TO PROVIDE LMR COVERAGE FOR IN-BOUND TACTICAL AIRCRAFT. SLIDE # 12. EMPLOYMENT OF THESE FORCES IN SUPPORT OF COMBAT OPERATIONS IS BASED ON SPECIFIC TACTICAL AIRCRAFT PENETRATION ROUTES THAT ARE ESTABLISHED BETWEEN THE STAGING BASE AND THE OBJECTIVE AREAS. OPTIMUM UTILIZATION AND EFFECTIVENESS OF SAR FORCES ARE REALIZED WHEN THESE FORCES ARE POSITIONED "IMMEDIATELY ADJACENT" TO THE OBJECTIVE AREA. BY "IMMEDIATELY ADJACENT" TO A AREA, IN REFER TO OFF-SHORE DUCKBOATS AND/OR ESTABLISHING ORBIT POSITIONS AND/OR ABOARD OF THE POLITICAL/ GEOGRAPHICAL BOUNDARIES OF THE OBJECTIVE AREA AND ALONG THE TACTICAL AIRCRAFT PENETRATION ROUTES, AS SLIDE 12. SHOWN ON THIS SLIDE.

~~SECRET~~

CONFIDENTIAL

HERE WE HAVE THE IDEAL SET-UP TO DEPICT THE TWO TYPICAL ARMS MISSION PROFILES WHICH WITH VERY FEW MODIFICATIONS WOULD BE APPLICABLE TO SUPPORT OF MOST CONFINED OPERATIONS. TO THE LEFT OF THIS SLIDE WE HAVE THE IN-LAND BAR CAPABILITY, WHICH EMPLOYS FORWARD OPERATING BASES IN FRIENDLY TERRITORY, IMMEDIATELY ADJACENT AND PROVIDING READY ACCESS TO THE OBJECTIVE HOSTILE AREA. ARMS COVERAGE IS PROVIDED BY EC-130P REFUELER AIRCRAFT ORBITING AT A PREDESIGNATED POSITION OR TRACK PROVIDING NAVIGATION ASSISTANCE TO STRIKE AIRCRAFT, AND ACTING AS THE ON SCENE AIRBORNE BAR MISSION COMMANDER. THIS AIRCRAFT WILL REMAIN AIRBORNE AND ON STATION TO PROVIDE COVERAGE DURING ALL TACTICAL STRIKE OPERATIONS. DEPENDENT ON THE CURRENT DAILY REQUIREMENTS AND HELICOPTER RESOURCES AVAILABLE, HH-3E AND/OR HH-53B HELICOPTERS OPERATING IN PAIRS WILL BE PREPOSITIONED AT FORWARD OPERATING LOCATIONS TO DECREASE REACTION TIME TO THE INCIDENT AREAS. DURING PEAK STRIKE ACTIVITIES THESE HELICOPTERS MAY BE FRAGGED FROM THEIR FORWARD OPERATING LOCATIONS TO ORBIT IN SELECTED AREAS ALONG THE OBJECTIVE AREA BORDERS. THESE ORBIT MISSIONS WILL USUALLY BE CONDUCTED BY A SINGLE HELICOPTER ACCOMPANIED BY RESCORT AIRCRAFT. THE SECOND HELICOPTER WILL MAINTAIN A COCKPIT ALERT POSTURE AND SCRAMBLE WITH ADDITIONAL RESCORT AIRCRAFT TO FOLLOW THE FIRST

~~SECRET~~

CONFIDENTIAL

HELICOPTER WHEN A RECOVERY MISSION IS INITIATED. THE ORBIT POSITIONS OR
TRACKS WILL BE ESTABLISHED TO INSURE THAT THE SECOND HELICOPTER WILL NEVER
BE MORE THAN 30 MINUTES BEHIND THE FIRST HELICOPTER; THE HC-130P AIRCRAFT
WILL PROVIDE INFLIGHT REFUELING TO THE HELICOPTERS DURING ORBIT AND PRIOR TO
PENETRATION OF AND ON THE RETURN FROM THE HOSTILE AREAS AS REQUIRED. THE OTHER
MISSION REQUIRES LONG RANGE/DURATION APPLICABLE TO EXTENDED OVER WATER AREAS
AND OPERATIONS OVER LAND MASSES WHERE FOLS ARE NOT AVAILABLE IMMEDIATELY
ADJACENT TO THE OBJECTIVE AREAS. AGAIN IN THIS SITUATION HC-130P REFUELING
WOULD BE PROGRAMMED TO PROVIDE ORBIT, NAVIGATION ASSISTANCE AND ON SCENE
AIRCRAFT SAR COORDINATION, DURING ALL TACTICAL STRIKE OPERATIONS. ADDITIONALLY
THE HC-130P COULD PROVIDE LIMITED AIRCREW RECOVERY CAPABILITY IN THE OFF SHORE,
AREA, USING THE FULTON SURFACE TO AIR RECOVERY SYSTEM. THE HH-3E OR HH-53B
HELICOPTER WOULD BE FRAGGED AND FLY PREDESIGNATED TRACKS PARALLEL TO THE
OBJECTIVE AREA BOUNDARIES IN THE OFF SHORE OR FRIENDLY/ENEMY HOSTILE AREAS.
THESE ORBITAL TRACKS WILL BE SCHEDULED TO PROVIDE COVERAGE AT THE PREDESIGNATED
POSITIONS ON THE TACTICAL AIRCRAFT PENETRATION ROUTES AT PREDESIGNATED TIMES.
REHEARSALS FOR REFUELING WILL BE COORDINATED WITH THE HC-130P AT PREDESIGNATED
POSITIONS OR AS REQUIRED TO PERFORM RECOVERY MISSIONS. NORMALLY WHEN HELICOPTERS
ASSUME THIS MISSION, RECOVERY OPERATIONS ARE LIMITED TO THE OFF-SHORE AND/or

~~CONFIDENTIAL~~

NON-HOSTILE ENVIRONMENTS. DETERMINATION TO PROSECUTE RECOVERY MISSIONS
OVER-HOSTILE AREAS FOR THIS TYPE MISSION COVERAGE WILL BE MADE BY THE HC-130P
SAR MISSION COORDINATOR AFTER EVALUATING CURRENT INTELLIGENCE INFORMATION
INTELLIGENCE INTERDICTION CAPABILITY AND AVAILABILITY OF RESCORT AND RESCAP
SUPPORT FOR THE RECOVERY OPERATION USUALLY BACK-UP RECOVERY CAPABILITY CAN
BE PROVIDED BY SCRAMBLING THE ALERT HELICOPTER FROM THE OPERATING BASE TIME
AND DISTANCE PERMITTING OR THROUGH US NAVAL HELICOPTERS BASED ABOARD SHIPS
IN THE AREA. THIS PROFILE WOULD BE APPLICABLE TO PHASE III OPERATIONS IN
COMUSAF80 OPLAN 6320 AS CAN BE SEEN ON THIS SLIDE: THE TWO TACTICAL ROUTE
DIAGRAMS FROM RAMEY TO THE OBJECTIVE AREAS ARE ESTABLISHED TO MAQUITA
AND MARACAIBO VENEZUELLA, EITHER OR BOTH OF WHICH WOULD BE USED TO CONDUCT
INITIAL OPERATIONS. IF FOR EXAMPLE ROUTE A IS THE PRIMARY OVER LAY # 1
STRIKE ROUTE TO THE OBJECTIVE AREA, THE HC-130P WOULD BE OPERATING ON STATION
AT POSITION A. SINCE EMERGENCY RECOVERY FIELDS ARE DESIGNATED BETWEEN THE
OBJECTIVE AREA AND THE STAGING BASE ONE HH-3E HELICOPTER WOULD FLY AN ORBITAL
TRACK AS INDICATED OVERLAY # 2 HERE BETWEEN THE OBJECTIVE AREA AND THE
EMERGENCY RECOVERY BASES. THIS PLACES THE HELICOPTERS IN A STRATEGIC POSITION
TO COVER NOT ONLY THE DESIGNATED PENETRATION WITHDRAWAL ROUTE BUT ALSO THE
IMMEDIATE AREA OF HIGHEST PROBABILITY OF RECOVERY REQUIREMENTS. OVERLAY # 3.

~~CONFIDENTIAL~~

~~SECRET~~

THE SAME PROVISIONS WOULD APPLY TO ROUTE B IF THAT IS DESIGNATED THE PRIMARY ROUTE. IF BOTH ROUTES ARE EMPLOYED SIMULTANEOUSLY, A DETERMINATION WILL BE MADE AS TO WHICH ROUTE WILL RECEIVE PEAK STRIKE ACTIVITIES AND THE HELICOPTER POSITIONED ACCORDINGLY AND OPERATING UNDER THE CONTROL OF THE HC-130P AIRCRAFT POSITIONED ON THAT ROUTE. IMMEDIATE RECOVERY CAPABILITY IS STILL AVAILABLE ON THE OTHER ROUTE BY USING THE HC-130P FULTON RECOVERY SURFACE TO AIR SYSTEM, IN THE OVER WATER AREA OR BY COORDINATION BETWEEN THE TWO HC-130P TO DIVERT THE HH-3E TO THE RECOVERY AREA. HOWEVER, IT IS READILY APPARANT FROM THIS MISSION PROFILE THAT THE HH-3ES COULD NOT SUPPORT MISSIONS ALONG THE PROPOSED STRIKE ROUTES FOR ANY EXTENDED PERIOD OF TIME. EACH HH-3E IS ALLOCATED 50 HRS A MONTH FLYING TIME WHICH WOULD PROVIDE 100 HRS AVAILABILITY FOR THE ENTIRE DEPLOYMENT/EMPLOYMENT MISSION FOR THE TWO ASSIGNED HELICOPTERS. A MORE REALISTIC MISSION PROFILE AND IMPROVED CAPABILITY COULD BE PROVIDED THROUGH COORDINATED AND AUTHORIZED USE OF THE ISLAND OF CURACAO. IF THIS ISLAND WERE AVAILABLE, FOR STAGING ONE HH-3E HELICOPTERS ON A DAILY BASIS. DAILY FLYING REQUIREMENTS FOR THE HELICOPTER FORCE COULD BE KEPT TO A MINIMUM THEREBY EXTENDING THE PERIOD OF TIME THE HELICOPTERS COULD SUPPORT THIS TYPE OPERATION. AGAIN LET ME REEMPHASIS, THAT SINCE THERE IS ONLY ONE HH-3E ON SCENE, ITS PREDOMINATE MISSIONS IS OFF-SHORE RECOVERY. ANY COMMITMENT OF THIS HELICOPTER TO HOSTILE AREA RECOVERY OPERATIONS

0

SECRET

SECRET

WILL BE AN ON SCENE DETERMINATION BY THE ON SCENE AIRBORNE SAR COMMANDER.

PRIOR TO COMMITMENT OF THE HELICOPTER TO A RECOVERY MISSION IN THE HOSTILE AREAS

THE FOLLOWING CRITERIA SHOULD BE MET: SLIDE 14. A. ASSURANCE THAT THE

CREW MEMBER SURVIVED BAIL-OUT OR CRASH LANDING AND IS NOT CAPTURED BY HOSTILE FORCES.

THIS INFORMATION IS USUALLY PROVIDED BY THE DOWNED AIRCRAFT'S WING MAN

TO THE MC-130 AIRBORNE SAR MISSION COMMANDER. B. DEDICATED OR ASSIGNED

RESCUE ESCORT AIRCRAFT (RESCORT). TO SUPPRESS HOSTILE ACTIONS AGAINST THE

RECOVERY FORCE, BY HOSTILE GROUND FORCES, ENROUTE TO AND AT THE RECOVERY

LOCATION. C. RESCUE CAP (RESCAP) TACTICAL FIGHTERS AT THE RECOVERY LOCATION

TO PREVENT INTERDICTION/INTERFERENCE OF THE RECOVERY OPERATIONS BY HOSTILE

AIR FORCES AND TO ASSIST THE RESCORT AIRCRAFT IN TERRORIZING THE RECOVERY AREA.

D. BACK-UP HELICOPTER RECOVERY CAPABILITY WHEN AVAILABLE, OR DETERMINED CRITICAL

TO MISSION SUCCESS, IN THE EVENT THE LEAD HELICOPTER HAS TO ABORT THE MISSION

DUE TO MECHANICAL MALFUNCTION OR IS SHOT DOWN BY HOSTILE FORCES. E.

ASSURANCE OF SOME DEGREE AT MISSION SUCCESS. AS A EXAMPLE IN NORTH VIETNAM

RECOVERY HELICOPTERS WOULD NOT NORMALLY BE COMMITTED TO RECOVERY OPERATIONS IN

DENSELY POPULATED, HIGHLY DEFENDED AREAS SUCH AS THE IMMEDIATE VICINITY OF HANOI

DUE TO THE EXTREMELY MARGINAL PROBABILITY OF SUCCESS AND THE HIGH PROBABILITY

CONFIDENTIAL

OF LOSS OF THE HELICOPTER AND CREW. THIS REFINED INTEGRATED PROCEDURE USED IN
COMBAT AIRCRAFT RECOVERY OPERATIONS IN HOSTILE AREAS IS CONTAINED IN THE AIR
FORCE TRAINING FILM "RESCUE AND YOU IN SEA" WHICH I WILL SHOW NOW. YOU WILL
NOTICE IN THIS MOVIE THAT NEITHER EMERGENCY RESOURCES OR HELICOPTER CREWS ARE MENTIONED.
AT THE TIME THIS FILM WAS PRODUCED, THIS CAPABILITY DID NOT EXIST IN THE
THEATER, BUT HAS BEEN INTRODUCED AND OPERATIONALLY COMMITTED TO THE BULF OF
TOMORROW'S MISSION IN JUNE OF THIS YEAR. THANK YOU.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

T
H
I

7-3601-6

7-3601-13
2 Dec 67 /
2 Dec 67 /

Director
Aerospace Studies Inst
ATTN: Archives Branch
Maxwell AFB, Alabama

UNCLASSIFIED

SMC

Bruford
on

Aerospace Rescue & Recovery Service
2 Dec 67 - 2 Dec 68

PROJECT CORONA HARVEST
CATALOGED
0005824
No 0005828

UNCLASSIFIED MIRACOR
Date

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

K318.203-13

BRIEFING

IN

AEROSPACE RESCUE AND RECOVERY SERVICE

CONCORDIA HARVEST

DO NOT DESTROY

No. 0005824

Presented by Major W. L. Crider
Members of Illinois State
Chamber of Commerce, 1001 AFB, Ill.
2 December 1966

MIRAGE

Date

UNCLASSIFIED

312

ATCH 4

4-5601-6

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

HQ A
SCOT

310
R. FORCE
RY SERVICE (MAC)
ILLINOIS 62225

UNCLASSIFIED

BRIEFING

AEROSPACE RESCUE AND RECOVERY SERVICE

GENTLEMEN,

Slide 1
Shield 00062

MY PRESENTATION WILL GIVE YOU A BRIEF OVER-VIEW OF THE AEROSPACE
RESCUE AND RECOVERY SERVICE (ARRS) WHICH WILL INCLUDE: (S)

Slide 2
ARRS
ARRS

Slide 3
Session 00064

THE RESCUE MISSION AND TASKS; RESCUE VEHICLE; SPACE FLIGHT SUPPORT;
A SHORT FILM OF AN ACTUAL COMBAT RESCUE MISSION; AND FINALLY THE
RESULTS AND EFFECTIVENESS OF THE RESCUE EFFORT. (S) BASICALLY, THE
ARRS MISSION IS TO PROVIDE A WORLD-WIDE CAPABILITY TO SEARCH FOR,
LOCATE AND RECOVER PERSONNEL AND AEROSPACE HARDWARE IN SUPPORT OF
USAF AND OTHER DOD AEROSPACE OPERATIONS. TWENTY-FOUR HOURS A DAY,
365 DAYS A YEAR, RESCUE MEN AND AIRCRAFT ARE ON DUTY AROUND THE
WORLD -- PLANNING FOR OR CONDUCTING OPERATIONS RANGING FROM COMBAT
AIRCRAFT RECOVERY IN THE RICE PADDIES AND JUNGLES OF SEASIA TO THE
SOPHISTICATED ASPECTS OF ASTRONAUT AND SPACE EQUIPMENT RECOVERY IN
WIDE AREAS OF THE OPEN SEA. ON THE AVERAGE, THERE ARE MORE THAN
100 RESCUE MISSIONS OF ONE KIND OR ANOTHER FLOWN EVERY 24 HOURS OVER
A WIDE AREA OF THE GLOBE. ALL THESE MISSIONS HAVE ONE THING IN
COMMON -- THE HIGH VALUE TRADITIONALLY PLACED ON HUMAN LIFE.
WHILE THE BROAD CONCEPT OF SEARCH AND RESCUE IS ESSENTIALLY HUMANITARIAN,

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

ITS MILITARY APPLICATION PROVIDES MANY REAL AND PRACTICAL ADVANTAGES. ALTHOUGH ARRS IS A RELATIVELY SMALL ORGANIZATION IN COMPARISON TO OTHER WORLD-WIDE COMMANDS, WE HAVE A UNIQUE MILITARY MISSION OF UNUSUAL SCOPE AND DIVERSITY. (S)

Slide 4
Tasks 00065

THE ARRS MISSION BREAKS DOWN INTO FOUR PRIMARY TASKS: PRECAUTIONARY MISSIONS WHICH INVOLVE POSITIONING RESCUE AIRCRAFT AT STRATEGIC AIRBORNE ORBIT POINTS FOR TRANSITING JET FIGHTERS AND SINGLE ENGINE CONVENTIONAL AIRCRAFT OVER OCEANIC OR DESOLATE TERRAIN ROUTES OF FLIGHT. THESE AIRCRAFT DO NOT NORMALLY CROSS THE OCEAN WITHOUT PRECAUTIONARY RESCUE COVERAGE. ALSO, TRANSOCEANIC INTERCONTINENTAL FLIGHTS BY THE PRESIDENT OF THE UNITED STATES REQUIRE RESCUE AIRCRAFT BE AIRBORNE AND WITHIN 45 MINUTES OF HIS POSITION AT ALL TIMES. THE ALERT POSTURE OF RESCUE FORCES PROVIDES AN IMMEDIATE CAPABILITY FOR RESPONDING TO EMERGENCY MISSIONS. SOME EXAMPLES ARE: A FIGHTER PILOT OVER WATER REPORTS HE MUST DITCH HIS AIRCRAFT; A BOMBER CREW IS REPORTED MISSING; A SMALL PRIVATE VESSEL IS LOST IN THE SOUTH PACIFIC; A USAF TRANSPORT ^{PLANE} ~~PLANE~~ SUFFERED AN ENGINE FAILURE AND REQUIRED INTERCEPT AND ESCORT BY A RESCUE AIRCRAFT; A CIVILIAN PRIVATE AIRCRAFT IS REPORTED MISSING; AND SO ON AND ON IT GOES. . . . IN THE AREA OF SPACE OPERATIONS WE HAVE AN EVER INCREASING REQUIREMENT. RESCUE HAS BEEN SUPPORTING SPACE MISSIONS SINCE THE FIRST MERCURY FLIGHT AND WE ARE NOW WORKING IN THE APOLLO

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

PROGRAM. MANY OF YOU MAY RECALL THE CONTINGENCY LANDING OF GEMINI 8 BACK IN 1966 WHEN THAT SPACECRAFT MADE AN EMERGENCY RE-ENTRY IN THE WEST PACIFIC INSTEAD OF THE PLANNED WEST ATLANTIC LANDING AREA. A RESCUE AIRCRAFT REACHED THE CAPSULE JUST AS IT WAS SPLASHING DOWN, THEN QUICKLY DEPLOYED THREE PARARESCUEMEN WHO ATTACHED THE FLOTATION COLLAR. SOME 20 MINUTES AFTER SPLASH DOWN, THE SPACECRAFT WAS SECURED, AND THE WORLD KNEW THE ASTRONAUTS WERE A-O.K. OUR FOURTH AND PRIMARY TASK IS AIRCREW RECOVERY WHICH WE ARE DEEPLY INVOLVED IN SEASIA.

Slide 5
Map of loca-
tions 00066

TO PERFORM THESE TASKS WE HAVE A FORCE CONSISTING OF APPROXIMATELY 5000 PEOPLE AND ²⁵⁹~~258~~ AIRCRAFT OF VARIOUS TYPES. THESE RESCUE FORCES ARE POSITIONED TO PROVIDE MAXIMUM CAPABILITY IN RESPONSE TO OUR GLOBAL MISSION RESPONSIBILITIES. AS SHOWN ON THIS CHART, ARRS FORCES ARE LOCATED IN THE CONTINENTAL UNITED STATES, GUAM, OKINAWA, PANAMA CANAL ZONE, ALASKA AND FOURTEEN FOREIGN COUNTRIES. AN EXTENSIVE ORGANIZATIONAL STRUCTURE IS NECESSARY TO PROVIDE COMMAND CONTROL, SUPERVISION, AND MISSION COORDINATION OF THE ASSIGNED FORCES. OUR CURRENT STRUCTURE CONSISTS OF 104 SUBORDINATE UNITS. IN ADDITION TO ARRS HEADQUARTERS HERE AT SCOTT, THERE ARE ^{Two divisions} FIVE MAJOR RESCUE AND RECOVERY CENTERS; ONE RESCUE GROUP; 17 SQUADRONS; 72 DETACHMENTS; and 9 OPERATING LOCATIONS. NOW THAT I HAVE DISCUSSED MISSION, TASKS AND ORGANIZATION, THE NEXT TOPIC IS AIRCRAFT, THEIR RECOVERY SYSTEM AND CAPABILITIES.

Slide 6
Org Structure
000336

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

Slide 7
HC-130
00050

THIS IS OUR LATEST FIXED WING AIRCRAFT -- THE HC-130 HERCULES. THIS TURBO JET AIRCRAFT WAS DESIGNED TO FLY AT HIGH ALTITUDES, CRUISE OVER 300 MPH, CARRY A MAXIMUM GROSS WEIGHT OF 175,000 LBS WITH A CRUISING RANGE OF 4,500 N.M. IT IS EQUIPPED WITH SPECIALIZED, SOPHISTICATED ELECTRONIC SEARCH TRACKING AND HOMING DEVICES. THE HC-130 ALSO HAS THE CAPABILITY TO REFUEL RESCUE HELICOPTERS IN FLIGHT. NOTE THE HUMP ON ITS BACK WHICH CONTAINS SENSITIVE TRACKING GEAR CAPABLE OF FIXING THE POSITION OF A SPACECRAFT DURING RE-ENTRY OR LOCATING THE POSITION OF A DOWNED FLYER IN THE JUNGLES OF SEASIA. THE HC-130 POSSESSES SPECIALIZED EQUIPMENT KNOWN AS A SURFACE-TO-AIR RECOVERY SYSTEM AND AN AIR-TO-AIR RECOVERY SYSTEM. (S)

Slide 8
HC-130
STAR
00076

THE SURFACE-TO-AIR RECOVERY SYSTEM WAS DESIGNED TO ALLOW AN IN FLIGHT AIRCRAFT TO RECOVER PERSONNEL AND MATERIAL FROM THE EARTH'S SURFACE. IT CAN RECOVER A MAXIMUM OF 500 LBS (OR TWO 250 LB MEN) FROM ELEVATIONS BETWEEN SEA LEVEL AND 6000 FT. AT ELEVATIONS BETWEEN 6000 FT AND 16,000 FT IT IS RESTRICTED TO 250 LBS. VERY BRIEFLY THIS SYSTEM WORKS AS FOLLOWS: (BRIEF SYSTEM FROM SLIDE) INCIDENTALLY, THE COMMANDER ARRS, ERIC GENERAL BROOKS, AIDED IN PROVING THIS SYSTEM DURING TESTS BY PARTICIPATING IN A DUAL LIVE RECOVERY. (S)

Slide 9
HC-130
Air-to-Air
00077

THE HC-130 ALSO HAS THE AIR-TO-AIR RECOVERY SYSTEM WHICH IS DESIGNED FOR MID AIR RECOVERY OF PARACHUTED OBJECTS WEIGHING 65 - 2500 LBS AT ALTITUDES BETWEEN 15,000 FT AND SEA LEVEL. RESCUE SERVICE IS CURRENTLY USING THIS SYSTEM IN CONJUNCTION WITH THE AIR WEATHER SERVICE'S AIR SAMPLING MISSION AND THE ATOMIC ENERGY COMMISSION'S AIR SAMPLING PROJECTS. THESE AIR SAMPLING PACKAGES ARE PLACED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

INTO THE ATMOSPHERE BY BALLOON FROM THE SURFACE UP TO 135,000 FT
AND BY AN AIR LAUNCH ROCKET UP TO 330,000 FT. BOTH REQUIRE PRECISION
TEAM WORK ON THE PART OF ^{RESCUE} CREWS TO INSURE SUCCESSFUL AIR RECOVERY.

~~(BRIEF SYSTEM FROM THE SLIDE.)~~

Slide 10
HH-43
00068

THE HH-43 HELICOPTER IS USED PRIMARILY FOR LOCAL BASE RESCUE SUPPORT.
THIS MEANS IT PROVIDES AN AIR ^{RESCUE} JURE AT FIGHTER BASES TO ASSIST
IN CRASH RESCUE/FIRE SUPPRESSION OPERATIONS FROM THE RUNWAY OUT
TO A RADIUS OF APPROXIMATELY 75 MILES. THE HH-43 IS CONFIGURED WITH
A HOIST CABLE OVER 200 FEET WITH A DEVICE KNOWN AS A FOREST PENETRATOR
WHICH IS ESPECIALLY DESIGNED FOR RECOVERY OF AIRCREW MEMBERS IN
HEAVILY WOODED AND JUNGLED AREAS. FOR RECOVERY OF SERIOUSLY ILL,
INJURED, OR WOUNDED INDIVIDUALS THE HH-43 HOIST CABLE CAN BE CONFIGURED
WITH A LITTER OR A RESCUE BASKET. ALTHOUGH THE HH-43 IS PRIMARILY
USED FOR LOCAL BASE RESCUE, IT HAS PERFORMED EXCEPTIONALLY MERITORIOUS
SERVICE TO MANKIND IN EVERY PHASE OF GLOBAL SEARCH RESCUE MISSIONS
RUNNING THE GAMUT FROM DISASTER RELIEF, MERCY MISSIONS, FIRE SUPPRESSION,
LOGISTICAL SUPPORT IN DESOLATE, MOUNTAINOUS REGIONS OF THE WORLD
AND MOST RECENTLY COMBAT AIRCREW RECOVERY IN THE HOSTILE ENVIRONMENT
OF SEASIA.

Slide 11
HH-3
00070

THE HH-3E SIKORSKY HELICOPTER IS AFFECTIONATELY REFERRED TO AS THE
"JOLLY GREEN GIANT". THIS LARGE, AMPHIBIOUS, TWIN TURBINE, SINGLE ROTOR
HELICOPTER, WITH A GROSS WEIGHT OF 22,000 LBS, AND A MAX SPEED OF
150 KNOTS, HAS A FLIGHT RANGE OF APPROXIMATELY 600 to 700 N.M. ALSO

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

IT IS OUR FIRST HELICOPTER POSSESSING A FULL INSTRUMENT FLIGHT CAPABILITY. IN ITS SPECIAL COMBAT CONFIGURATION, IT IS EQUIPPED WITH THE FOLLOWING: ARMOR PLATING FOR THE CREW AND VITAL COMPONENTS; SELF SEALING FUEL TANKS; M-60 MACHINE GUNS; A RESCUE HOIST AND A FOREST PENETRATOR SPECIALLY DESIGNED FOR RETRIEVING INDIVIDUALS UP THROUGH DENSE TREES AND JUNGLE CANOPIES. IN ADDITION TO THESE FEATURES IT CAN BE REFUELED IN FLIGHT BY THE HC-130. (S)

Slide 12
HH-53
00071

THE SIKORSKY HH-53 IS THE LATEST HELICOPTER TO BE ADDED TO THE RESCUE INVENTORY. IT HAS GREATER PERFORMANCE PARAMETERS THAN THE H-3 JOLLY GREEN AND IS CAPABLE OF SURVIVING IN A SMALL ARMS AND LIGHT ANTI-AIRCRAFT FIRE ENVIRONMENT. IT IS ALMOST TWICE THE SIZE OF THE H-3 WITH A 40% BETTER HOVER CAPABILITY WHICH HAS GREATLY IMPROVED THE ABILITY TO OPERATE IN THE MOUNTAINOUS REGIONS OF SEASIA. THE HH-53 IS ARMED WITH THREE MINI-GUNS CAPABLE OF FIRING AT A RATE OF 2000 OR 4000 ROUNDS PER MINUTE WHICH INCREASES ITS DEGREE OF SURVIVABILITY CONSIDERABLY. THIS HELICOPTER HAS THE CAPABILITY OF LIFTING AND TRANSPORTING LARGE OBJECTS. IT RECENTLY LIFTED A MOCK UP OF AN APOLLO CAPSULE WHICH WEIGHED ^{14,800}~~12,500~~ LBS. SPACE PROGRAM FEASIBILITY TESTS CONDUCTED UNDER PROJECT "COMBAT HARVEST" ARE EXPECTED TO INTRODUCE AN ENTIRELY NEW CONCEPT OF RECOVERY FOR THE MANNED SPACE PROGRAM. THE HH-53 AS WELL AS THE HH-3, CAN BE REFUELED IN FLIGHT BY THE HC-130s. AIR REFUELING GREATLY INCREASES FLEXIBILITY IN THE TACTICAL USE OF THE HELICOPTER. THE USE OF THIS AIR REFUELING CAPABILITY IS KNOWN AS THE "RESCUE TEAM CONCEPT". (S)

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

Slide 13
Team Concept
75

BY COMBINING THE CAPABILITIES OF THE HC-130 WITH EITHER THE HH-3 OR HH-53 INTO A TEAM IT HAS PRODUCED A "QUANTUM - JUMP" IN OUR RESCUE CAPABILITIES AND OPERATIONAL CONCEPTS. THIS REFUELING TEAM CONCEPT IS NOW BEING EMPLOYED VERY SUCCESSFULLY ON A DAILY BASIS DURING RESCUE OPERATIONS IN SEASIA. THE ACTUAL GLOBAL OPERATIONAL CAPABILITY OF THIS TEAM CONCEPT WAS DRAMATICALLY PROVED ON JUNE 1, 1967 WHEN TWO RESCUE HH-3 HELICOPTERS RECEIVED NINE AIR REFUELINGS BY HC-130 AIRCRAFT. THESE AIR REFUELINGS ALLOWED THE TWO HELICOPTERS TO FLY NON-STOP FROM NEW YORK TO PARIS IN 30 HOURS AND 46 MINUTES -- A WORLD RECORD. WITH THIS NEW TEAM CONCEPT, RESCUE FORCES WILL BE ABLE TO SEARCH, LOCATE AND RECOVER PERSONNEL AND HARDWARE JUST ABOUT ANY PLACE IN THE FREE WORLD.

Slide 15
HC-97
207

ALTHOUGH THE HC-97 IS NOT A RECOVERY VEHICLE, IT DOES POSSESS EMERGENCY STORES AND DROPPABLE EQUIPMENT INCLUDING TWO PARARESCUERS TO AID SURVIVORS IN DISTRESS. ARCC HAS ONLY ONE ACTIVE HC-97 UNIT, THE 305TH RESCUE RESERVE SQUADRON AT SELFRIDGE AFB, MICHIGAN, WHICH WAS CALLED TO ACTIVE DUTY DURING THE "PUEBLO CRISIS". THE 305TH HAS NINE HC-97 AIRCRAFT ASSIGNED WHICH ARE USED TO AUGMENT OTHER RESCUE UNITS AND SUPPORT RESCUE COMMITMENTS AT KEFLAVIK, ICELAND. THIS RESERVE UNIT SINCE CALLED TO ACTIVE DUTY, HAS BEEN EXTENSIVELY EXERCISED. ARCC WOULD BE HARD-PRESSED TO MEET ITS ~~RESCUE~~ COMMITMENTS WITHOUT 305TH HC-97 SUPPORT.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

Slide 16
HU-16
00067

THE AMPHIBIOUS HU-16 GRUMMAN ALBATROSS IS AN OLD WORKHORSE -- A VETERAN OF TWO WARS -- AND HAS BEEN IN THE RESCUE INVENTORY SINCE 1949. THIS AIRCRAFT WAS USED IN VIETNAM UNTIL REPLACED BY THE MORE MODERN HC-130. WHILE OPERATING IN THE GULF OF TONKIN, JUST OFF THE NORTH VIETNAM COAST, THE HU-16 SAVED THE LIVES OF 47 U.S. COMBAT AIRCREW MEN. UNTIL ~~VERY~~ RECENTLY HU-16'S OPERATED IN KOREA FOLLOWING THE PUEBLO CRISIS. FINALLY, THE OLD "WORKHORSE" WAS GRACEFULLY RETIRED FROM THE ACTIVE FLEET, BUT THERE ARE STILL THREE RESERVE HU-16 SQUADRONS IN THE CONTINENTAL UNITED STATES WHO ~~OCCASIONALLY~~ ^{Frequently} ARE CALLED UPON TO SUPPORT SEARCH AND RESCUE MISSIONS. ()

Slide 17
P.J.
00078

WHILE TEAM WORK IS THE ESSENCE OF ALL RESCUE OPERATIONS, ONE MEMBER OF THE TEAM DESERVES SPECIAL MENTION -- THE PARARESCUEMAN, OFTEN CALLED P.J. THE PARARESCUEMEN TRULY COMPLETE THE RECOVERY SYSTEM. THEY ARE TRAINED PROFESSIONALS -- SCUBA QUALIFIED -- EXPERT MEDICAL TECHNICIANS -- PRECISION PARACHUTISTS AND HIGHLY PROFICIENT IN SURVIVAL TECHNIQUES. TO QUALIFY, EACH VOLUNTEER REQUIRES ONE YEAR OF SPECIALIZED, RIGOROUS AND INTENSIVE TRAINING BEFORE RECEIVING THE PARARESCUEMAN'S COVETED MAROON PERMIT. WHEN HE JUMPS INTO THE OPEN SEA, HIS EQUIPMENT WEIGHS BETWEEN 160 AND 180 POUNDS, OFTEN MORE THAN THE MAN HIMSELF. IN ADDITION TO HIS SCUBA TANK, HE CARRIES TWO PARACHUTES, TWO DIFFERENT TYPES OF FLotation GEAR, A

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

MEDICAL KIT, KNIFE, SHARK REPELLENT, RADIO, ETC., ALL OF WHICH MAY BE NECESSARY TO COPE WITH HIS ENVIRONMENT. TIME AND AGAIN PARARESCUEMEN HAVE PARACHUTED TO THE AID OF INJURED ~~SERVICEMEN~~ ^{INDIVIDUALS} AND THEY HAVE BEEN INCREASINGLY EMPLOYED IN THE SPACE RECOVERY PROGRAM. THEY ARE A highly DEDICATED GROUP WHICH MACHINES CANNOT MATCH. WITHOUT THEIR CAPABILITY, SUCCESSFUL AIRCREW RECOVERY IN SEASLA WOULD BE GREATLY DECREASED, AND IN MANY CASES NOT POSSIBLE.

Slide 18
Space
208

NOW THAT YOU HAVE SEEN THE FORCES WE HAVE TO WORK WITH, LET'S TAKE A LOOK AT RESCUE SPACE FLIGHT SUPPORT. ARRS IS COMMITTED TO PROVIDE RESCUE FORCES TO SUPPORT MANNED SPACE FLIGHT RECOVERY OPERATIONS ON A WORLD-WIDE BASIS.

Slide 19
Space
383

THIS SUPPORT CONSISTS OF LAUNCH SITE, LAUNCH ABORT, PRIMARY LANDING, AND CONTINGENCY LANDING AREA COVERAGE. THE LAUNCH SITE AREA IS THAT AREA AROUND AND IMMEDIATELY DOWN RANGE FROM THE LAUNCH PAD. THE LAUNCH ABORT AREA IS A 100 MILE WIDE AREA ALONG THE GROUND TRACK FROM THE LAUNCH SITE TO THE WEST COAST OF AFRICA. THE PRIMARY LANDING AREA IS SELECTED PRIOR TO EACH MISSION AND IS IDENTIFIED AS THE PLANNED END-OF-MISSION LANDING AREA. THE CONTINGENCY AREA IS NORMALLY ALL THE EARTH'S SURFACE BETWEEN ^{40°N} ~~30°N~~ AND ^{40°S} ~~30°S~~ LATITUDES, ~~ALMOST~~ ^{ALMOST} HALF OF THE GLOBE. ~~FOR~~ RECOVERY REQUIREMENTS ARE EXPRESSED IN TERMS OF ACCESS TIME. ACCESS TIME IS THE ELAPSED TIME BETWEEN NOTIFICATION THAT A LANDING HAS OCCURRED AND THAT TIME WHEN MEDICAL AID IS AVAILABLE TO THE ASTRONAUT. IT INCLUDES

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

LOCATION OF THE SPACECRAFT, DEPLOYMENT OF THREE PARARESCUEMEN AND A FLOTATION COLLAR, COLLAR INSTALLATION, AND HATCH OPENING. ACCESS TIME VARIES ACCORDING TO THE PROBABILITIES OF LANDING AND THE AREA CONCERNED. THE ACCESS TIME IN THE LAUNCH SITE AREA IS 30 MINUTES; IN THE LAUNCH ABORT AREA, IT IS FOUR HOURS; IN THE PRIMARY LANDING AREA, TWO HOURS; AND IN THE CONTINGENCY LANDING AREA, 18 HOURS. (S)

Slide 20
Space
AROOPS No. 1

TO MEET THESE ACCESS TIMES FOR APOLLO 9, FOR EXAMPLE, ARRS PROVIDED THREE HELICOPTERS IN THE LAUNCH SITE AREA AND THREE HC-130 AIRCRAFT AIRBORNE IN THE LAUNCH ABORT AREA AT THESE POSITIONS. (PAUSE) (S)

Slide 21
Space
AROOPS
No. 2

DURING RECOVERY OPERATIONS, TWO HC-130s WERE AIRBORNE IN THE PRIMARY LANDING AREA FOR APOLLO 9 WHICH WAS APPROXIMATELY 300 MILES NNW OF PUERTO RICO. IN ADDITION, 18 HC-130'S WERE ON GROUND ALERT - TWO AT EACH OF 9 LOCATIONS, COVERING THE CONTINGENCY AREA THROUGHOUT THE APOLLO 9 SPACE MISSION. THE CONTINGENCY FORCES WERE AT HICKAM AFB, HAWAII; HOWARD AFB, CANAL ZONE; KINDLEY AB, BERMUDA; Lajes AB IN THE AZORES; ASCENSION ISLAND; MAURITIUS, SAMOA; PERTH AUSTRALIA; AND TACHIKAWA AB, JAPAN. (S)

Slide 22
Space
AROOPS No. 3

THE TOTAL ARRS RECOVERY FORCE COMMITTED TO APOLLO 9 CONSISTED OF 22 AIRCRAFT AT 10 LOCATIONS AND ABOUT 341 PERSONNEL. THIS IS TYPICAL ARRS COVERAGE FOR APOLLO SPACEFLIGHT SUPPORT. (S)

Slide 23
SEASIA
00083

THE MOST IMPORTANT ARRS MISSION TODAY IS COMBAT AIRCREW RECOVERY FROM HOSTILE ENVIRONMENTS OF SEASIA. THE RESCUE AREA OF RESPONSIBILITY IN SEASIA COVERS APPROXIMATELY 1,000,000 SQ MILES STRETCHING EAST

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FROM BURMA TO AND INCLUDING THE GULF OF TONKIN AND REACHING FROM THE NORTH VIETNAM/CHINESE BORDER, SOUTH TO AND INCLUDING THE GULF OF SIAM. RESCUE FORCES IN SEASIA INCLUDE ⁹~~20~~ DETACHMENTS OF HH-43 HELICOPTERS IN SOUTH VIETNAM LOCATED AS FAR NORTH AS DANANG NEAR THE DMZ AND SPREAD SOUTHWARD TO BINH THUY IN THE DELTA. IN ADDITION TO ~~FOUR~~ ^{FIVE} HH-43 DETACHMENTS IN THAILAND, THERE ARE HH-53'S AND H-3'S AT UDORN AND NAKHON PHANOM, THAILAND, RESPECTIVELY. HH-3'S ARE ALSO BASED AT DANANG IN SOUTH VIETNAM. THE RESCUE HELICOPTERS ARE ON CONTINUOUS GROUND ALERT WITH FREQUENT AIRBORNE ORBITS FLOWN TO COVER STRIKE AIRCRAFT FLYING HIGH RISK MISSIONS. THE HC-130'S OPERATE FROM TUY HOA IN SOUTH VIETNAM AND EACH DAY FROM DAWN TO DUSK, TWO WILL ORBIT OVER THE GULF OF TONKIN AND OVER THE THAILAND/LAOS BORDER. THE ORBITING HC-130'S ACT AS AIRBORNE MISSION CONTROL SHIPS AND PROVIDE AN AIR REFUELING SOURCE FOR RESCUE HELICOPTERS. WORKING CLOSELY WITH THE TACTICAL FORCES OF THE 7TH AF, ARCS HAS DEVELOPED AND EMPLOYED A NUMBER OF HIGHLY EFFECTIVE TECHNIQUES AND PROCEDURES. THE BASIC AND UNDERLYING FACTOR IS THE SUPERB TEAMWORK AND SUPPORT PROVIDED BY MANY TACTICAL UNITS OF THE AIR FORCE AS WELL AS BY OUR COMRADES IN ARMS IN THE ARMY, THE NAVY AND THE MARINE CORPS. AT THIS POINT LET'S SEE A SHORT FILM ^{OF} ~~ON~~ AN ACTUAL RESCUE THAT DESCRIBES VERY VIVIDLY THE COMBAT AIRCREW RECOVERY MISSION IN SEASIA. (S)

(FILM -- "NO MAN EXPENDABLE")

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

Slide 24
- 15
A

12

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

Slide 26
A Saves
breakout
00085

AS A FURTHER BREAKOUT THE ACTUAL SEASIA SAVE HISTORY IS REFLECTED
ON THIS CHART. (CLARIFY CHART AND SAVE DEFINITION-RECAP TOTAL
¹⁶²¹ COMBAT SAVES AND DRAMATIZE STATISTICS - ACR COMBAT SAVES ALONE
WOULD CREW 9 TACTICAL FIGHTER WINGS)

OUR PRIME CONCERN IS NOT LOOKING BACK AT PAST ACCOMPLISHMENTS
BUT RATHER TO CONTINUE THE DEVELOPMENT OF A DYNAMIC, FLEXIBLE
FORCE CAPABLE OF RESPONDING TO ALL CURRENT AND FUTURE GLOBAL
SEARCH AND RECOVERY REQUIREMENTS. TODAY AND EACH DAY IN THE
FUTURE, RESCUE CREWS ARE AND WILL BE ALERT AND READY TO PERFORM
THEIR DUTIES QUICKLY AND EFFICIENTLY IN ORDER (5)

Slide 27
Shield
00063

"THAT OTHERS MAY LIVE"-

~~GENTLEMEN, THAT CONCLUDES MY BRIEFING. I WILL BE HAPPY TO~~

~~ENTERTAIN ANY QUESTIONS.~~ Gentlemen it has been a

since pleasure to speak with you
today. I wish you a most happy day
ahead and trust that you will give it
your full support - Thank you

DEPARTMENT OF THE AIR FORCE
HQ AEROSPACE RESCUE AND RECOVERY SERVICE (MAC)
SCOTT AFB, ILLINOIS 62225

BRIEFING
ON
AEROSPACE RESCUE AND RECOVERY SERVICE

COL. J. A. HARVEST
DO NOT DESTROY

No. 000 5828

CHIEF

308

ATCH 8

Presented by Col H. H. Bridges
to International Order of Characters
Annual Conference, Stamford, Conn.
Dec 2, 1967

308

THIS
PAGE
IS
UNCLASSIFIED

GENTLEMEN

1 ALTHOUGH RESCUE IS SMALL IN SIZE COMPARED TO OTHER WORLD-WIDE
COMMANDS, WE HAVE A UNIQUE MISSION OF UNUSUAL SCOPE AND DIVERSITY.

SLIDE 2 BASICALLY, WE PROVIDE A WORLD-WIDE CAPABILITY TO SEARCH FOR,
LOCATE, AND RECOVER PERSONNEL AND AEROSPACE HARDWARE IN SUPPORT
OF USAF AND OTHER DOD GLOBAL AEROSPACE OPERATIONS. IN COMBAT,
WE PROVIDE THE CAPABILITY FOR THE RESCUE OF MILITARY PERSONNEL
FROM HOSTILE AREAS.

SLIDE 3 THERE ARE FOUR PRIMARY TASKS CONNECTED WITH OUR MISSION - IN THE
"PRECAUTIONARY" AREA, WE PROVIDE ORBITS AT MANY LOCATIONS
ALONG THE OVERWATER WORLD AIRLINES OF COMMUNICATIONS. FIGHTER
AIRCRAFT WILL NOT NORMALLY FLY ACROSS THE OCEANS WITHOUT OUR
RESCUE PLANES IN POSITION, EXAMPLE AF 1. WE ACCOMPLISH MANY
"EMERGENCY" MISSIONS, ALL TYPES, FOR ALL PEOPLE, SUCH AS A
FIGHTER PILOT HAS HAD TO LEAVE HIS AIRCRAFT - - A BOMBER CREW IS
MISSING, - - A SMALL PRIVATE VESSEL IS LOST IN THE SOUTH PACIFIC -
A USAF TRANSPORT PLANE HAS LOST AN ENGINE AND REQUIRES INTERCEPT
AND ESCORT, - - A CIVILIAN PRIVATE AIRCRAFT HAS BEEN REPORTED
MISSING, AND SO ON IT GOES.

IN THE AREA OF "SPACE OPERATIONS" WE FIND AN EVER INCREASING
NUMBER OF REQUIREMENTS. WE HAVE BEEN OPERATING IN CONJUNCTION
WITH THE MANNED SPACE FLIGHTS EVER SINCE THE MERCURY PROGRAM
STARTED, AND WE ALSO RECOVER AEROSPACE HARDWARE ON A PREPLANNED
BASIS.

OUR PRIME TASK IS THE RECOVERY OF "COMBAT MILITARY PERSONNEL",
AND WE ARE DEEPLY INVOLVED IN SOUTHEAST ASIA AT THIS TIME.

SLIDE 4 TO PERFORM THESE TASKS, WE HAVE A GLOBAL ORGANIZATIONAL STRUCTURE
Org AS SHOWN HERE. IN ADDITION TO OUR HEADQUARTERS IN ORLANDO, FLA,
60000

WE HAVE 105

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

WE HAVE BEEN IN THE UNITED STATES, GUAM,
OKINAWA, PANAMA CANAL ZONE, ALASKA AND 15 FOREIGN COUNTRIES.
OUR RESOURCES CONSIST OF 5,100 PERSONNEL AND 267 AIRCRAFT OF VARIOUS
TYPES.

TODAY I WOULD LIKE TO GIVE YOU A BRIEF REVIEW OF OUR EQUIPMENT,
SEARCH AND RESCUE CAPABILITIES, DISCUSS OUR PRIMARY MISSIONS IN
GENERAL TERMS, AND INTRODUCE YOU TO A VERY SPECIAL AND UNIQUE
MEMBER OF OUR RESCUE TEAM. A QUICK LOOK AT SOME OF OUR AIRCRAFT

SLIDE 5
HU-16
00061

AND THEIR CAPABILITIES. FIRST, THE HU-16 GRUMMAN ALBATROSS, THE
OLD WORKHORSE - - VETERAN OF TWO WARS, HAS BEEN IN OUR INVENTORY
SINCE 1949, AND ALTHOUGH IT IS BEING PHASED OUT OF OUR INVENTORY,
IT HAS BEEN VERY EFFECTIVE IN THE GULF OF TONKIN WHERE IT HAS
ACCOMPLISHED 47 COMBAT SAVES IN THE LAST TWO YEARS.

SLIDE 6
HH-43
00068

THE KAMAN HH-43 HUSKIE, - - USED AROUND THE WORLD BY OUR LOCAL
BASE RESCUE (LBR) UNITS, PLUS EXTENSIVELY IN SOUTHEAST ASIA BOTH
AS AN LBR AND COMBAT RECOVERY AIRCRAFT.

SLIDE 7
CH-3C
00067

THIS IS THE CH-3C, USED PRIMARILY AT CAPE KENNEDY TO SUPPORT THE
EASTERN TEST RANGE.

SLIDE 8
HH-3
00070

THE HH-3 SIKORSKY HELICOPTER, WHICH IS THE COMBAT VERSION OF THE
CH-3C, POPULARLY REFERRED TO AS THE "JOLLY GREEN GIANT". THIS
LARGE TWIN TURBINE HELICOPTER, WITH A GROSS WEIGHT OF 22,000 LBS,
AND TOP SPEED OF 142 KNOTS, HAS A ~~MAXIMUM~~ RANGE OF APPROX 600 - 700 NM/
ALSO, IT IS OUR FIRST HELICOPTER POSSESSING A FULL INSTRUMENT FLIGHT
CAPABILITY. IN ITS SPECIAL COMBAT CONFIGURATION, IT IS EQUIPPED WITH:
ARMOR PLATING FOR THE CREW AND VITAL COMPONENTS, - - SELF-SEALING
FUEL TANKS, - - M-60 MACHINE GUNS, - - A RESCUE HOIST AND A FOREST
PENETRATOR SPECIALLY DESIGNED FOR RETRIEVING PERSONNEL UP THROUGH

THE DENSE JUNGLE

THE DENSE ... THESE FEATURES IT IS CAPABLE OF BEING REFUELLED IN FLIGHT. THIS FEATURE GIVES US A GREAT BOOST IN THE TACTICAL USE OF THE ROTARY WING AIRCRAFT.

SLIDE 9
HH-53

cc 71

THE HH-53 IS THE LATEST HELICOPTER TO BE ADDED TO OUR INVENTORY. THIS TYPE HELICOPTER WAS PROCURED JUST RECENTLY IN RESPONSE TO AN URGENT MACV REQUIREMENT FOR AN IMPROVED AIRCRAFT CAPABLE OF SURVIVING IN A SMALL ARMS AND ANTI-AIRCRAFT FIRE ENVIRONMENT. THIS HELICOPTER IS ALSO CAPABLE OF BEING REFUELED IN FLIGHT. IT IS ALMOST TWICE THE SIZE OF THE JOLLY GREEN, WITH A MAXIMUM GROSS WEIGHT OF 39,000 LBS. ITS SPEED AND HOVER PERFORMANCE IS APPROX 41% BETTER THAN THE H-3 WHICH WILL GREATLY IMPROVE OUR CAPABILITY TO OPERATE IN THE HOSTILE MOUNTAINOUS REGIONS OF NVN. IN GENERAL, ITS COMBAT CONFIGURATION WILL BE SIMILAR TO THE "JOLLY GREEN'S" WITH ONE MAIN EXCEPTION. WITH ITS ADDED LIFT CAPACITY IT WAS POSSIBLE TO ADD A MUCH MORE POWERFUL AND EFFECTIVE PROTECTIVE WEAPONS SYSTEM. - - WITH ITS THREE MINI-GUNS THAT ARE CAPABLE OF FIRING AT A RATE OF 2,000 - 4,000 ROUNDS PER MINUTE, IT INCREASES OUR DEGREE OF SURVIVABILITY CONSIDERABLY. SINCE THIS HELICOPTER HAS THE CAPABILITY OF PICKING UP AND CARRYING OBJECTS, COMPARABLE TO THE SIZE AND WEIGHT OF THE APOLLO CAPSULE, IT HAS GREAT POTENTIAL FOR FUTURE USE IN THE SPACE PROGRAM. FEASIBILITY TESTS ARE BEING CONDUCTED IN THIS AREA UNDER PROJECT 'COMBAT HARVEST' THAT WILL INTRODUCE AN ENTIRELY NEW CONCEPT OF RECOVERY FOR THE MANNED SPACE PROGRAM.

SLIDE 10
HC-130

cc 71

THIS IS OUR NEWEST FIXED WING AIRCRAFT, THE HC-130 HERCULES. THIS AIRCRAFT IS DESIGNED TO: FLY AT HIGH ALTITUDE, - - CRUISE AT 290 KTS TAS, - - CARRY A MAXIMUM GROSS WT OF 175,000, - - HAVE A CRUISING RANGE OF 4,500 NM, - - HAVE SPECIAL COMMUNICATIONS PLUS A UHF DIRECTIONAL TRACKER, (COOKE ELECTRIC TRACKER/ARD-17) - NOTE: THE HUMP ON ITS BACK, WHICH WE USE PRIMARILY FOR PINPOINT TRACKING OF THE SPACE VEHICLE

UPON RE-ENTRY TO

THE DE SE THESE FEATURES IT IS CAPABLE
OF BEING REFUELED IN FLIGHT. THIS FEATURE GIVES US A GREAT BOOST IN
THE TACTICAL USE OF THE ROTARY WING AIRCRAFT.

SLIDE 9
HH-53

ccc 71

THE HH-53 IS THE LATEST HELICOPTER TO BE ADDED TO OUR INVENTORY.
THIS TYPE HELICOPTER WAS PROCURED JUST RECENTLY IN RESPONSE TO
AN URGENT MACV REQUIREMENT FOR AN IMPROVED AIRCRAFT CAPABLE OF
SURVIVING IN A SMALL ARMS AND ANTI-AIRCRAFT FIRE ENVIRONMENT.
THIS HELICOPTER IS ALSO CAPABLE OF BEING REFUELED IN FLIGHT. IT
IS ALMOST TWICE THE SIZE OF THE JOLLY GREEN, WITH A MAXIMUM GROSS
WEIGHT OF 39,000 LBS. ITS SPEED AND HOVER PERFORMANCE IS APPROX
41% BETTER THAN THE H-3 WHICH WILL GREATLY IMPROVE OUR CAPABILITY
TO OPERATE IN THE HOSTILE MOUNTAINOUS REGIONS OF NVN. IN GENERAL,
ITS COMBAT CONFIGURATION WILL BE SIMILAR TO THE "JOLLY GREEN'S" WITH
ONE MAIN EXCEPTION. WITH ITS ADDED LIFT CAPACITY IT WAS POSSIBLE TO
ADD A MUCH MORE POWERFUL AND EFFECTIVE PROTECTIVE WEAPONS
SYSTEM. - - WITH ITS THREE MINI-GUNS THAT ARE CAPABLE OF FIRING AT
A RATE OF 2,000 - 4,000 ROUNDS PER MINUTE, IT INCREASES OUR DEGREE OF
SURVIVABILITY CONSIDERABLY. SINCE THIS HELICOPTER HAS THE CAPABILITY
OF PICKING UP AND CARRYING OBJECTS, COMPARABLE TO THE SIZE AND
WEIGHT OF THE APOLLO CAPSULE, IT HAS GREAT POTENTIAL FOR FUTURE USE
IN THE SPACE PROGRAM. FEASIBILITY TESTS ARE BEING CONDUCTED IN
THIS AREA UNDER PROJECT 'COMBAT HARVEST' THAT WILL INTRODUCE
AN ENTIRELY NEW CONCEPT OF RECOVERY FOR THE MANNED SPACE PROGRAM.

SLIDE 10
HC-130

ccc 71

THIS IS OUR NEWEST FIXED WING AIRCRAFT, THE HC-130 HERCULES. THIS
AIRCRAFT IS DESIGNED TO: FLY AT HIGH ALTITUDE, - - CRUISE AT 290 KTS
TAS, - - CARRY A MAXIMUM GROSS WT OF 175,000, - - HAVE A CRUISING RANGE
OF 4,500 NM, - - HAVE SPECIAL COMMUNICATIONS PLUS A UHF DIRECTIONAL
TRACKER, (COOKE ELECTRIC TRACKER/ARD-17) - NOTE: THE HUMP ON ITS BACK,
WHICH WE USE PRIMARILY FOR PINPOINT TRACKING OF THE SPACE VEHICLE
UPON RE-ENTRY TO

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

SLIDE 11 UPON RE-ENTRY A NUMBER OF THESE AIRCRAFT HAVE
 Air Refueling BEEN ESPECIALLY EQUIPPED AS AIR REFUELING TANKERS FOR OUR HELICOP-
 TERS. BY COMBINING THE CAPABILITIES OF THE HC-130 WITH OUR TWO NEW
 HELICOPTERS INTO A "TEAM" IT HAS PRODUCED A "QUANTUM JUMP"
 IN OUR RESCUE CAPABILITIES AND OPERATIONAL CONCEPTS. THIS NEW
 CONCEPT IS NOW BEING EMPLOYED VERY SUCCESSFULLY IN SEASIA ON A
 DAILY BASIS. FURTHER, THIS INCREASED CAPABILITY WAS RECENTLY
 DRAMATICALLY DEMONSTRATED TO THE WORLD ON 1 JUN, WHEN TWO OF OUR
 JOLLY GREEN HELICOPTERS FLEW 3,510 NM FROM NEW YORK TO PARIS NON-

SLIDE 12 STOP, UTILIZING 9 REFUELINGS IN THEIR RECORD BREAKING 30-HR AND 46-MIN
 Team Concept FLIGHT. WITH THIS NEW "TEAM CONCEPT" NOW FOR THE FIRST TIME
 0007.5 IN RESCUE'S HISTORY WE WILL BE ABLE TO "SEARCH, LOCATE AND
 RECOVER", PERSONNEL AND HARDWARE JUST ABOUT ANY PLACE IN THE
 FREE WORLD.

SLIDE 13 NOW LET'S LOOK AT SOME OF OUR SPECIALIZED RECOVERY SYSTEMS. FIRST,
 Surface/Air THE SURFACE-TO-AIR RECOVERY SYSTEM WHICH WAS DESIGNED TO ALLOW AN
 0007.6 AIRCRAFT TO AIR SNATCH PERSONNEL OR MATERIAL WEIGHING UP TO 500 LBS
 FROM THE EARTH'S SURFACE. VERY BRIEFLY, THIS SYSTEM WORKS AS
 FOLLOWS:

(BRIEF SYSTEM FROM SLIDE - - POINTING OUT OPERATIONAL
 TODAY PICKING UP MATERIAL "PROJECT SPEARGUN", PLUS
 IT IS AVAILABLE FOR LIVE PICKUPS IF EMERGENCY SITUATION
 REQUIRES.)

SLIDE 14 THIS IS OUR AIR-TO-AIR RECOVERY SYSTEM, WHICH WAS DESIGNED TO AIR
 Air/Air Recovery SNATCH PARACHUTED OBJECTS WEIGHING 65 TO 2,500 LBS AT ALTITUDES
 0007.7 BETWEEN 15,000 FT AND SEA LEVEL. VERY BRIEFLY THIS SYSTEM WORKS
 AS FOLLOWS:

BRIEF FROM SLIDE

ARRS IS CURRENTLY UTILIZING THIS SYSTEM ON A MONTHLY
 BASIS IN CONJUNCTION WITH THE AIR WEATHER SERVICE'S AIR SAMPLING
 MISSION, TTLED, "ASH CAN" AND "ALARR". THE ASH CAN PACKAGES
 4 ARE GROUND LAUNCHED

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

SLIDE 11
Air/Air
Refueling

A NUMBER OF THESE AIRCRAFT HAVE BEEN ESPECIALLY EQUIPPED AS AIR REFUELING TANKERS FOR OUR HELICOPTERS. BY COMBINING THE CAPABILITIES OF THE HC-130 WITH OUR TWO NEW HELICOPTERS INTO A "TEAM" IT HAS PRODUCED A "QUANTUM JUMP" IN OUR RESCUE CAPABILITIES AND OPERATIONAL CONCEPTS. THIS NEW CONCEPT IS NOW BEING EMPLOYED VERY SUCCESSFULLY IN SEASIA ON A DAILY BASIS. FURTHER, THIS INCREASED CAPABILITY WAS RECENTLY DRAMATICALLY DEMONSTRATED TO THE WORLD ON 1 JUN, WHEN TWO OF OUR JOLLY GREEN HELICOPTERS FLEW 3,510 NM FROM NEW YORK TO PARIS NON-

SLIDE 12
Team
Concept

00075

STOP, UTILIZING 9 REFUELINGS IN THEIR RECORD BREAKING 30-HR AND 46-MIN FLIGHT. WITH THIS NEW "TEAM CONCEPT" NOW FOR THE FIRST TIME IN RESCUE'S HISTORY WE WILL BE ABLE TO "SEARCH, LOCATE AND RECOVER", PERSONNEL AND HARDWARE JUST ABOUT ANY PLACE IN THE FREE WORLD.

SLIDE 13
Surface/Air

00076

NOW LET'S LOOK AT SOME OF OUR SPECIALIZED RECOVERY SYSTEMS. FIRST, THE SURFACE-TO-AIR RECOVERY SYSTEM WHICH WAS DESIGNED TO ALLOW AN AIRCRAFT TO AIR SNATCH PERSONNEL OR MATERIAL WEIGHING UP TO 500 LBS FROM THE EARTH'S SURFACE. VERY BRIEFLY, THIS SYSTEM WORKS AS FOLLOWS:

(BRIEF SYSTEM FROM SLIDE - - POINTING OUT OPERATIONAL TODAY PICKING UP MATERIAL "PROJECT SPEARGUN", PLUS IT IS AVAILABLE FOR LIVE PICKUPS IF EMERGENCY SITUATION REQUIRES.)

SLIDE 14
Air/Air
Recovery

00077

THIS IS OUR AIR-TO-AIR RECOVERY SYSTEM, WHICH WAS DESIGNED TO AIR SNATCH PARACHUTED OBJECTS WEIGHING 65 TO 2,500 LBS AT ALTITUDES BETWEEN 15,000 FT AND SEA LEVEL. VERY BRIEFLY THIS SYSTEM WORKS AS FOLLOWS:

BRIEF FROM SLIDE

ARRS IS CURRENTLY UTILIZING THIS SYSTEM ON A MONTHLY BASIS IN CONJUNCTION WITH THE AIR WEATHER SERVICE'S AIR SAMPLING MISSION, TITLED, "ASH CAN" AND "ALARR". THE ASH CAN PACKAGES ARE GROUND LAUNCHED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

RECOVERY OPERATIONS AT ALTITUDES OF 125,000 FT.
THE ALTITUDE OF THE JUMP FROM A JET AIRCRAFT UP TO 330,000 FT.,
MUCH OF WHICH REQUIRES PRECISION TEAM WORK ON THE PART OF OUR
CREWS TO INSURE SUCCESSFUL RECOVERY.

SLIDE 15 ONE MEMBER OF OUR TEAM, WHILE TEAM WORK IS THE ESSENCE OF ALL
RESCUE OPERATIONS, DESERVES SPECIAL MENTION, OUR WORLD FAMOUS
"PARARESCUEMAN" - THIS MAN IS THE HEART OF OUR RESCUE TEAM
- THEY ARE TRAINED PROFESSIONALS - SCUBA QUALIFIED, - EXPERT
MEDICAL TECHNICIANS - DETECTORS OF BLOODFLOWS, AND HIGHLY TRAINED
IN SURVIVAL TECHNIQUES - TO QUALIFY FOR THIS POSITION, IT REQUIRES
ONE YEAR OF SPECIALIZED TRAINING - THREE MAIN ACTION UNIFORMS

SLIDE 16 (NOTE MAROON BEREIL, THE PARARESCUEMAN IS THE ARM OF RESCUE THAT
IN Uniform CAN GO BEYOND THE CONFINES OF THE MACHINE AND PHYSICALLY CHANGE
THE CONDITIONS AND SITUATIONS OF A DISTRESSED PERSON, REGARDLESS
OF THE WEATHER OR ENVIRONMENT AND MAKE IT POSSIBLE TO EFFECT A
SUCCESSFUL RECOVERY. NORMALLY WHEN HE JUMPS OUT OF AN AIRCRAFT
HE IS CARRYING 150 TO 180 LBS OF EQUIPMENT

INTRODUCE SGT NEAL

SHOW SLIDES ON PJS

SLIDE 16A TREE JUMP SUIT

SLIDE 16B LANDING IN TREES

SLIDE 16C MOUNTAIN CLIMBING

SLIDE 17 JUST A QUICK REVIEW OF OUR MISSION IN SUPPORT OF THE SPACE RECOVERY
Aerospace Recovery PROGRAM. RESCUE HAS PARTICIPATED IN THE SPACE PROGRAM SINCE ITS
INCEPTION. THE NAVY HAS PRIMARY RESPONSIBILITY FOR RECOVERY IN
THE PLANNED LANDING AREAS, WITH RESCUE BACKING THEM UP IN A

SLIDE 18 SECONDARY ROLE. RESCUE HAS THE PRIMARY RESPONSIBILITY FOR THE
ENTIRE CONTINGENCY AREA AS SHOWN HERE. AN AREA BETWEEN 40°N
AND 40°S, WHICH COVERS APPROXIMATELY 1/3 OF THE EARTH'S SURFACE

TO DO THIS,

ARE GROUND LAUNCHED TO ALTITUDES OF 135,000 FT.
THE ALARR IS AIR LAUNCHED FROM A JET AIRCRAFT UP TO 330,000 FT,
BOTH OF WHICH REQUIRES PRECISION TEAM WORK ON THE PART OF OUR
CREWS TO INSURE SUCCESSFUL RECOVERY.

SLIDE 15 ONE MEMBER OF OUR TEAM, (WHILE TEAM WORK IS THE ESSENCE OF ALL
PJ
60070 RESCUE OPERATIONS, DESERVES SPECIAL MENTION, OUR WORLD FAMOUS
"PARARESCUEMAN". THIS MAN REALLY COMPLETES OUR RESCUE TEAM.
-- THEY ARE TRAINED PROFESSIONALS, -- SCUBA QUALIFIED, -- EXPERT
MEDICAL TECHNICIANS, -- PRECISION PARACHUTISTS, AND HIGHLY TRAINED
IN SURVIVAL TECHNIQUES. TO QUALIFY FOR THIS POSITION, IT REQUIRES
ONE YEAR OF SPECIALIZED TRAINING. THREE MAIN ACTION UNIFORMS _

SLIDE 16 (NOTE: MAROON BERET), THE PARARESCUEMAN IS THE ARM OF RESCUE THAT
PJ Uniform
CAN GO BEYOND THE CONFINES OF THE MACHINE AND PHYSICALLY CHANGE
THE CONDITIONS AND SITUATIONS OF A DISTRESSED PERSON, REGARDLESS
OF THE WEATHER OR ENVIRONMENT AND MAKE IT POSSIBLE TO EFFECT A
SUCCESSFUL RECOVERY. NORMALLY WHEN HE JUMPS OUT OF AN AIRCRAFT
HE IS CARRYING 160 TO 180 LBS OF EQUIPMENT.

INTRODUCE SGT NEAL

SHOW SLIDES ON PJ'S

SLIDE 16A TREE JUMP SUIT

SLIDE 16B LANDING IN TREES

SLIDE 16C MOUNTAIN CLIMBING

SLIDE 17 JUST A QUICK REVIEW OF OUR MISSION IN SUPPORT OF THE SPACE RECOVERY
Aerospace
Recovery PROGRAM. RESCUE HAS PARTICIPATED IN THE SPACE PROGRAM SINCE ITS
60019 INCEPTION. THE NAVY HAS PRIMARY RESPONSIBILITY FOR RECOVERY IN
THE PLANNED LANDING AREAS, WITH RESCUE BACKING THEM UP IN A

SLIDE 18 SECONDARY ROLE. RESCUE HAS THE PRIMARY RESPONSIBILITY FOR THE
Contin- ENTIRE CONTINGENCY AREA AS SHOWN HERE, -- AN AREA BETWEEN 40°N
gency area
60020 AND 40°S, WHICH COVERS APPROXIMATELY 1/2 THE EARTH'S SURFACE.

TO DO THIS,

DE 19 TO DO THIS, WE HAVE AIRCRAFT AND
 employed CREWS DEPLOYED AROUND THE WORLD AS SHOWN HERE, SO AS TO BE ABLE
 TO RESPOND IMMEDIATELY IF ANYTHING GOES WRONG. TO DATE NASA
 HAS ENJOYED GREAT SUCCESS IN PINPOINTING THE ASTRONAUTS IN THE
 PLANNED LANDING AREAS, BUT AS YOU MAY REMEMBER, GT-8, ON 16 MAR
 1966, IT WAS NECESSARY TO MAKE AN EARLY LANDING IN THE WESTERN
 PACIFIC AREA. OUR FORCES WERE SCRAMBLED FROM OKINAWA AND
 TACHIKAWA AND WERE ACTUALLY ON SCENE AND VISUALLY OBSERVED

SLIDE 20 THE SPACECRAFT LANDING IN THE CONTINGENCY AREA. SGT NEAL HERE
 Collar WAS ONE OF THE PARARESCUEMEN WHO WAS DEPLOYED INTO THE OCEAN AND
 Instl INFLATED THE FLOTATION COLLAR AROUND THE SPACECRAFT, AND OUR
 AIRCRAFT CONTINUED TO CAP THE SPACECRAFT UNTIL A DESTROYER ARRIVED
 SOME HOURS LATER TO MAKE THE PICKUP.

SLIDE 21 OUR MOST PRESSING MISSION TODAY IS COMBAT RECOVERY IN SOUTHEAST
 SEA ASIA. JUST A FEW WORDS ON OUR ACTIVITIES HERE, THEN I WILL SHOW YOU
 A FILM THAT DESCRIBES VERY VIVIDLY OUR MISSION IN THE COMBAT RECOVERY
 ROLE.

SLIDE 21A
 MAP SEA

BRIEF FROM SLIDE COVERING:

RESCUE FORCE DEPLOYMENT

MISSION TASK FORCE PROFILE

EXPLOITS OF CREWS

"TEAM CONCEPT" OPERATION

TO GIVE YOU A BETTER PICTURE OF THE ACTUAL CONDITIONS THAT EXIST
 IN SEASIA, THESE SLIDES DEPICT THE TYPICAL ENVIRONMENT IN WHICH
 WE MUST OPERATE.

SLIDES

22
 23
 24
 25
 26

WITH OUR PRESENT

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WITH OUR PRESENCE WE HAVE ACHIEVED AN ENVIABLE
RECORD OF COMBAT SAVES. WE JUST RECENTLY COMPLETED THE
1300TH SAVE IN THE COMBAT AREA. MOST SIGNIFICANTLY, WITHIN
THIS TOTAL ARE THE EQUIVALENT OF OVER 5 TACTICAL WINGS OF COMBAT
PILOTS. THIS IS INDEED A MOST REWARDING DIVIDEND ON A RELATIVELY
MODEST INVESTMENT. ALL OF THIS HAS NOT BEEN WITHOUT COST OR
LOSS. FOR EACH RESCUE AIRCREWMAN KILLED, CAPTURED, OR MISSING
IN SEASIA, WE HAVE RETURNED A TOTAL OF 46 MEN FROM COMBAT AREAS.
FOR EACH AIRCRAFT LOST IN COMBAT, WE HAVE RETURNED A TOTAL OF
101 MEN WHO HAVE BEEN RESCUED.

NOW I WOULD LIKE TO SHOW YOU A SHORT MOVIE THAT WAS FILMED
ENTIRELY IN SEASIA OF AN ACTUAL RESCUE MISSION. I BELIEVE YOU WILL
FIND THIS FILM A MOST INTERESTING AND REVEALING DOCUMENT OF OUR
RESCUE CREWS IN ACTION UNDER COMBAT CONDITIONS.

FILM

PERFORMING THIS COMBAT MISSION OUR CREWS HAVE EARNED THE HIGHEST
SLIDE 28 RESPECT OF OUR NATION. THE 3D GROUP IS ONE OF THE MOST DECORATED
Decorations
cccc 7 AIR FORCE UNITS IN THE ANNALS OF AMERICAN HISTORY, 3718 DECORATIONS
SINCE JUL 1964, (INCLUDING 8 AF CROSSES, 101 SILVER STARS, PLUS TWO
PRESIDENTIAL UNIT CITATIONS WHICH WERE PERSONALLY PRESENTED AT THE
WHITE HOUSE BY PRESIDENT JOHNSON.

cccc 3 CONCLUSION

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

SMC

Project	20	1.2	1
Responsible Officer	RETURN		
ITN	1		
Howell	1		

CLASSIFIED BY
SUBJECT TO GENE... CATION
S... OF EXEC... 11652
AUTOMATICALLY DECLASSIFIED AT TWO YEAR
INTERVALS DECLASSIFIED ON DECEMBER
31, 1976

*Aerospace Rescue & Recovery Service (ARRS)
Combat Aircrew Recovery (ACR)
Briefing
for
Space Center (U)
September 1968*

DO NOT DESTROY

CATALOGED

No. 000 5830

Declassified at 3 year
intervals; declassified
after 12 years

MIRAC

Date

7-3601-8

CONFIDENTIAL

DL17
HQ HERO

OF THE AIR FORCE
& RECOVERY SERVICE (MAC)
CE BASE, ILLINOIS 62225

COMBAT AIRCREW RECOVERY (ACR)

BRIEFING

FOR

SPACE CENTER (G)

CATALOGED

5830

SEPT 68

GENTLEMEN:

Slide 1
mblem
00063

THIS MORNING I SHALL PRESENT A BRIEF OVERVIEW OF THE
AEROSPACE RESCUE AND RECOVERY SERVICE ROLE IN SOUTHEAST
ASIA.

PRIOR TO DISCUSSING OUR COMBAT OPERATIONS, I'D LIKE TO
ACQUAINT YOU WITH OUR WORLD-WIDE ORGANIZATION AND MISSION
RESPONSIBILITY.

ALTHOUGH RESCUE IS RATHER SMALL IN SIZE COMPARED TO THE
OTHER COMMANDS, WE HAVE A UNIQUE MISSION OF UNUSUAL SCOPE
AND DIVERSITY.

Slide 2
Mission
00064

BASICALLY, WE PROVIDE A WORLD-WIDE CAPABILITY TO SEARCH
FOR, LOCATE, AND RECOVER PERSONNEL AND AEROSPACE HARDWARE
IN SUPPORT OF USAF AND OTHER DOD GLOBAL AEROSPACE OPERATIONS.
IN COMBAT, WE PROVIDE THE CAPABILITY FOR RESCUE OF MILITARY
PERSONNEL FROM HOSTILE AREAS.

DOWNGRADED AT 3 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS
DOD DIR 5200.10

(THIS PAGE IS UNCLASSIFIED)

ARXDC# 68-142
THERE ARE FOUR PRIMARY TASKS

GROUP 4
Downgraded at 3 year intervals;
Declassified after 12 years.

301

ATCH 10

K38.203-13

7-3601-8

Slide 3
SEAsia
0082

THERE ARE FOUR PRIMARY TASKS CONNECTED WITH OUR MISSION:

FIRST: WE PROVIDE PRECAUTIONARY MISSIONS WHICH INCLUDE PROVIDING ORBITS, COMMONLY REFERRED TO AS DUCKBUTTS, FOR JET FIGHTERS AND SINGLE ENGINE RECIPROCATING AIRCRAFT TRANSITING OCEANIC OR DESOLATE TERRAIN ROUTES OF FLIGHT. ORBITS ARE ALSO PROVIDED FOR TRANSOCEANIC FLIGHTS BY THE PRESIDENT AND REQUIRE RESCUE AIRCRAFT TO BE WITHIN 30 MINUTES OF AF #1 AT ALL TIMES.

SECOND: WE ACCOMPLISH MANY EMERGENCY MISSIONS, ALL TYPES FOR ALL PEOPLE, SUCH AS: A FIGHTER PILOT HAS HAD TO LEAVE HIS AIRCRAFT--A BOMBER CREW IS MISSING--A SMALL PRIVATE VESSEL IS LOST IN THE SOUTH PACIFIC, AND SO IT GOES.

THIRD: IN SPACE OPERATIONS, WE HAVE AN EVER INCREASING NUMBER OF REQUIREMENTS. HERE WE HAVE PROVIDED RECOVERY CAPABILITY IN CONJUNCTION WITH THE MANNED SPACE FLIGHTS SINCE THE MERCURY PROGRAM STARTED AND ALSO RECOVER AERO-SPACE HARDWARE ON A PREPLANNED BASIS.

Slide 4
SEAsia
0082

FINALLY, OUR PRIMARY TASK, AND THE ONE TO WHICH WE ARE DEEPLY COMMITTED AT THE PRESENT TIME IS COMBAT AIRCREW

SECRET

RECOVERY IN SOUTHEAST ASIA.

SECRET

RECOVER / 15 JUL 65 AS 15

5
UU066

TO PERFORM THESE TASKS WE HAVE A GLOBAL ORGANIZATIONAL STRUCTURE AS SHOWN HERE. THIS ORGANIZATION CONSISTS OF 108 UNITS LOCATED IN 98 GEOGRAPHICAL LOCATIONS. OUR RESOURCES CONSIST OF SOME 5400 PERSONNEL AND 262 AIRCRAFT, OF WHICH 199 ARE ROTARY WING.

Slide 5-a
ARRS
Historical
Data
00039

LET ME DIGRESS HERE FOR A MOMENT. DURING THE KOREAN WAR, RESCUE BUILT UP TO A PEAK STRENGTH OF ABOUT 13,000 MEN. AFTER THE KOREAN CONFLICT, BECAUSE OF CHANGES IN NATIONAL POLICY, RESCUE SERVICE WAS REDUCED TO A RATHER INEFFECTIVE FORCE OF SLIGHTLY OVER 1400 PERSONNEL AND 69 AIRCRAFT. EVEN THE WAR-TIME REQUIREMENTS CLAUSE WAS WITHDRAWN FROM OUR MISSION STATEMENT ON THE GENERALLY ACCEPTED, BUT MISTAKEN, PHILOSOPHY THAT: "THE WARTIME MISSION WOULD MERELY BE AN EXTENSION OF OUR PEACETIME EQUIPMENT AND PROCEDURES." THIS, OF COURSE, IS THE REVERSE OF WHAT IT SHOULD HAVE BEEN, AND OUT OF CONTEXT WITH SUBSEQUENT EVENTS.

WITH INTRODUCTION OF TACTICAL FORCES INTO THE VIETNAM CONFLICT IN 1964, THE REQUIREMENT FOR A COMBAT RECOVERY FORCE WAS BROUGHT PAINFULLY TO LIGHT. THE DECREASE IN RESCUE AND RECOVERY FORCES ALONG WITH THE ELIMINATION OF THE COMBAT RECOVERY MISSION, SEVERELY REDUCED OUR RESCUE CAPABILITY IN BOTH MANPOWER AND

SECRET

SECRET

IN BOTH MANPOWER AND EQUIPMENT. AS A RESULT, TECHNOLOGY IN THE AREA OF PERSONNEL RECOVERY DID NOT KEEP PACE WITH THE BUILDUP AND MODERNIZATION OF TACTICAL FORCES.

WITH THE ADVENT OF THE VIETNAM CONFLICT EARLY IN 1964 WE DEPLOYED FORCES INTO SOUTHEAST ASIA ON A TDY BASIS. AS RESOURCES WERE EXTREMELY LIMITED, THE ONLY AIRCRAFT AVAILABLE FOR DEPLOYMENT WERE HU-16s AND A FEW UNARMORED, LIMITED RANGE HH-43Bs, WHICH HAD BEEN PROCURED STRICTLY FOR LOCAL CRASH RESCUE AND FIRE SUPPRESSION. TO MEET COMBAT RECOVERY NEEDS, TWELVE OF THE HH-43Bs WERE MODIFIED ON A PRIORITY BASIS FOR OPERATION IN A SMALL ARMS ENVIRONMENT. HOWEVER, WITH THE EXTENSION OF TACTICAL AIR ACTIVITIES INTO NORTH VIETNAM AND LAOS, THE REQUIREMENT FOR COMBAT RECOVERY FAR EXCEEDED THE RANGE AND CAPABILITIES OF THESE AIRCRAFT. AS A DIRECT RESULT OF THE NEED FOR ADDITIONAL COMBAT RECOVERY CAPABILITY, DEVELOPMENT AND PRODUCTION OF A NEW HELICOPTER, THE HH-3 WAS SHARPLY ACCELERATED.

Slide 6
Force
Buildup
00092

THIS SLIDE DEPICTS OUR BUILDUP OF FORCES IN SOUTHEAST ASIA. DURING THE INITIAL PHASES IN 1964 THROUGH 1965 WE DEPLOYED OVER 1000 PERSONNEL (BOTH AIRCREWS AND SUPPORT PERSONNEL) ON A TDY BASIS. TO DO THIS, IT WAS NECESSARY TO INACTIVATE 10 STATESIDE LOCAL BASE RESCUE DETS. IT WAS DECEMBER 1965

SECRET

WHEN OUR FIRST HH-3

(THIS PAGE IS UNCLASSIFIED)

SECRET

WHEN OUR F-4S "JOLLY GREEN GIANT" HELICOPTERS REACHED SOUTHEAST ASIA. THE HH-3 WAS THE FIRST HELICOPTER TO HAVE AN INFLIGHT REFUELING CAPABILITY, AND VASTLY INCREASED THE RANGE OF OPERATIONS THAT IS SO ESSENTIAL TO RESCUE EFFORTS IN NORTH VIETNAM. AT THE PRESENT TIME WE HAVE A TOTAL OF 32 HH-43Bs and Fs; 11 HC-130Ps; 22 HH-3Es, AND 6 HH-53s ASSIGNED TO SOUTHEAST ASIA. THIS LATTER AIRCRAFT, THE HH-53, IS A FOLLOW ON DEVELOPMENT OF THE ORIGINAL "JOLLY GREEN GIANT" AND GIVES US MUCH MORE LIFT, RANGE, AND ARMOR CAPABILITY IN THE COMBAT ENVIRONMENT OF SOUTHEAST ASIA.

Slide 7
Wartime
Mission
00142

IT IS INTERESTING TO NOTE, THAT NOT UNTIL MARCH 1965 WAS OUR WARTIME MISSION "TO PROVIDE TRAINED AND EQUIPPED COMBAT READY SEARCH AND RESCUE UNITS" REINSTATED.

Slide 8
SEA Org.
Chart
00143

IN 1964 WE BEGAN REPLACEMENT OF THE TDY UNITS WITH PCS ASSIGNMENT OF BOTH PEOPLE AND EQUIPMENT. THIS CHART DEPICTS OUR PRESENT ORGANIZATIONAL STRUCTURE IN SOUTHEAST ASIA. ONE IMPORTANT FEATURE TO BE POINTED OUT IS THAT THE COMMANDER OF THE 3rd ARRG, WEARS A NUMBER OF HATS: FIRST, HE IS COMMANDER OF ALL ARRS FORCES IN SOUTHEAST ASIA, AND ACTS AS ADVISOR TO THE 7th AF COMMANDER ON ALL SAR

MISSIONS. SECOND, HE IS A

SECRET

MISSIONS. COLT A DIRECTOR ON THE 7th AF STAFF AND, AS THE AEROSPACE RESCUE DIRECTOR AT TAN SON NHUT, IS THE CHIEF OF THE JOINT SEARCH AND RESCUE CENTER.

HERE IS HOW THE SYSTEM OPERATES. THE JOINT SEARCH AND RESCUE CENTER (JSARC) AT TAN SON NHUT, AND ITS SATELLITE RESCUE COORDINATION CENTERS (RCCS) LOCATED AT UDORN AB IN THAILAND AND MONKEY MOUNTAIN NEAR DA NANG IN SOUTH VIETNAM, ARE LINKED VIA TELE-COMMUNICATIONS AND MULTIPLE HF SINGLE SIDE BAND RADIO WITH THE AIR RESCUE HC-130P AIRBORNE MISSION CONTROL AND HELICOPTER REFUELER AIRCRAFT. THESE AIRCRAFT OPERATE ON DAWN TO DUSK ORBIT OVER THE GULF OF TONKIN AND OVER THE NORTHEASTERN THAILAND/LAOTIAN BORDER. THESE SUB-CENTERS ARE LINKED IN THE SAME MANNER WITH NAVAL SAR FORCE CONTROL ABOARD THE MISSILE DESTROYER ON STATION IN THE NORTHERN GULF OF TONKIN. FURTHER, THE RESCUE CONTROL CENTERS ARE CO-LOCATED WITH TACTICAL AIR CONTROL CENTERS HAVING IMMEDIATE ACCESS TO CURRENT INTELLIGENCE DATA THAT IS VITAL TO SAR TASK FORCE COMPOSITION AND COORDINATED EMPLOYMENT OF RESCUE FORCES. SINCE THE VERY NATURE OF THE COMBAT SAR MISSION PRECLUDES PREPLANNED EXECUTION ORDERS; THE REACTION TO RECOVERY REQUIREMENTS OBVIOUSLY TAKES FORMATION AFTER THE FACT. THE KNOWLEDGE THAT AN AIRCRAFT IS DOWN

SECRET

MAY EMANATE FROM MANY

(THIS PAGE IS UNCLASSIFIED)

MAY EMANATE FROM A DIVERSE VARIETY OF SOURCES SUCH AS
A WINGMAN, A GROUND SIGHTING, ETC.

Slide 9
Helicopter
Concept of
Operation
00098

NOW LET'S LOOK AT HOW OUR FORCES ARE UTILIZED. EMPLOYMENT
OF RESCUE FORCES IN SUPPORT OF COMBAT OPERATIONS IN SOUTH-
EAST ASIA IS PREDICATED ON ESTABLISHING THE SAR/ACR FORCE
IMMEDIATELY ADJACENT TO THE OBJECTIVE AREAS ALONG SPECIFIED
TACTICAL AIRCRAFT AREAS OF OPERATION. PRIOR TO AERIAL
REFUELING, PREPOSITIONING OF THE HELICOPTER FORCES WAS
DEPENDENT SOLELY UPON THE AVAILABILITY OF FORWARD OPERATING
BASES, AND COMBAT AIRCREW RECOVERY CAPABILITY WAS LIMITED
BY THE HELICOPTER FUEL RANGE. AS A RESULT, REACTION TIMES IN
RESPONSE TO MISSIONS DEEP INTO NVN WERE ADVERSELY AFFECTED.

THESE LIMITATIONS HAVE NOW BEEN OFFSET BY THE HELICOPTER AND
TANKER TEAM. CURRENTLY RESCUE EMPLOYS THE HH-3E AND HH-53
ON DAILY AIRBORNE ALERT IN THE GULF OF TONKIN, AND ALONG THE
LAOTIAN BORDER. THESE HELICOPTERS ESTABLISH ORBITAL TRACKS
IMMEDIATELY ADJACENT TO NVN AND IN CLOSE PROXIMITY TO STRIKE
AIRCRAFT PENETRATION AND WITHDRAWAL ROUTES. THE DURATION
OF THESE ORBITS ARE ESTABLISHED TO PROVIDE MAXIMUM SAR
COVERAGE AND IMMEDIATE RESPONSE TO ACR REQUIREMENTS DURING

SECRET

PEAK STRIKE PERIODS.

10
Con-

PEAK STRIKE PERIODS. THE CAN BE EXTENDED AS MISSION REQUIREMENTS DICTATE, BY IN-FLIGHT REFUELING, WITHOUT COMPROMISING THE RADIUS OF ACTION OF THE HELICOPTER. WHEN RESPONDING TO AN ACR MISSION, THEY WILL BE REFUELED IMMEDIATELY PRIOR TO THE MISSION, DURING PENETRATION, AND UPON RETURN FROM NVN. THESE OPERATIONAL CONCEPTS, PROVIDE MAXIMUM EXTENDED RANGE TO OUR HELICOPTERS.

Film
Aerial
Refueling

AT THIS TIME I WOULD LIKE TO SHOW YOU A SHORT FILM CLIP OF THE HC-130 AND HELICOPTER REFUELING OPERATION.

BY COMBINING THE CAPABILITIES OF THE HC-130P LONG RANGE TANKER AIRCRAFT AND THE HELICOPTERS INTO A RECOVERY TEAM, IT HAS PRODUCED A QUANTUM JUMP IN RESCUE CAPABILITIES AND OPERATIONAL CONCEPTS. THIS NEWLY ACQUIRED CAPABILITY IS NOW BEGINNING TO PROVIDE COMBAT RESCUE THE FLEXIBILITY OF OPERATIONS TO REACT TO THE LONG RANGE - HIGH ALTITUDE - AND RAPID REACTION REQUIREMENTS.

Slide 11
HH-43B/F

TO SUPPLEMENT OUR SOUTHEAST ASIA ACR CAPABILITY, HH-43B AND F MODELS PROVIDE LOCAL AIRCREW RECOVERY AND AIRBORNE FIRE SUPPRESSION CAPABILITY AT 14 AIR BASES IN SOUTH VIETNAM AND THAILAND.

THE RESOURCES I HAVE MENTIONED THUS FAR REPRESENT THE USAF

SECRET

PRIMARY SAR FORCE AND ARE

PRIMARY SA-OR E-7-AP SUPPORTED BY TACTICAL FIGHTER
AIRCRAFT PROVIDING "RESCAP" OR MIG COVER, AND "RESCORT"
OR GROUND FIRE SUPPRESSION. THE OPERATION OF THIS RELATIVELY
SMALL FORCE MUST BE VIEWED AS A TEAM EFFORT AND, IN ACTION
TOGETHER, FORM THE SAR TASK FORCE.

PRIMARY NAVAL SAR FORCES ARE COMPRISED OF SMALL
HELICOPTERS BASED ON THE FANTAIL OF THREE DESTROYERS.
THESE ARE AUGMENTED BY NAVY SH-3As BASED ABOARD SMALL
CARRIERS. NAVAL SAR FORCES ARE FRAGGED DAILY IN SUPPORT OF
NAVAL AIR OPERATIONS. BOTH USAF AND NAVY FORCES ARE CON-
TROLLED OR COORDINATED BY THE JSARC.

ALL OF OUR COMBAT EXPERIENCE AND ANALYSIS HAS BORN-OUT
THE NEED TO DECREASE ACR REACTION TIMES. WITH THE PRESENT
STATE-OF THE ART IN HELICOPTER DEVELOPMENT, THIS CAN ONLY BE
ACHIEVED BY AERIAL REFUELING. WHEN THE HH-53 HAS THE CAPABILITY
FOR NIGHT AND LOW VISIBILITY OPERATION, IT WILL BE ABLE TO
PERFORM ALL FACETS OF THE SOUTHEAST ASIA MISSION ON A 24 HOUR A
DAY BASIS. EVEN SO, LACK OF SUFFICIENT ACR AIRCRAFT REMAINS
A MAJOR DETERRENT TO FULFILLING THE TOTAL REQUIREMENT.

THIS IS REPRESENTED BY THE

SECRET

SECRET

Slide 12
In Country
Sorties
00243

THIS IS REPRESENTED BY THE PEAK LEVEL OF CONFLICT, EXPRESSED IN OUT OF COUNTRY SORTIES OF 18,000 PER MONTH AND IN-COUNTRY SORTIES WHICH HAVE REACHED 58,000 SORTIES PER MONTH. IN SHORT, WE ARE SUPPORTING A 1968 LEVEL OF TACTICAL SORTIES

Slide 13
In Country
Sorties
00243

WITH THE NUMBERS OF RESCUE AIRCRAFT PROGRAMMED FOR 1965

Slide 14
Saves

EVEN THOUGH OUR ASSIGNED AIRCRAFT HAVE BEEN FAR BELOW THE REQUIRED FORCE, WE HAVE ACHIEVED AN ENVIABLE RECORD OF COMBAT SAVES. WE HAVE JUST RECENTLY COMPLETED THE _____ SAVE OF ALL TYPES, IN THE COMBAT AREA.

Slide 15
ARRS
Shield
00088

GENTLEMEN, I'LL CONCLUDE MY PRESENTATION WITH A FILM THAT DRAMATICALLY ILLUSTRATES HOW THE RESCUE FORCES ARE UTILIZED ON A TYPICAL COMBAT RECOVERY MISSION. THIS FILM WAS MADE IN SOUTHEAST ASIA AND DEPICTS THE COMMAND AND CONTROL FUNCTION, THE FORMING OF A JOINT RECOVERY TASK FORCE, PLUS THE COMPLETE SEQUENCE OF EVENTS THAT LEAD UP TO AN ACTUAL SUCCESSFUL RECOVERY. I THINK YOU WILL FIND THIS FILM POINTS OUT NOT ONLY OUR COMBAT RECOVERY CAPABILITY, BUT ALSO THE PROBLEMS WE FACE IN THE DEVELOPMENT OF MORE SOPHISTICATED

~~AIR CRAFT AND EQUIPMENT~~

SECRET

SECRET

AIRCRAFT AND EQUIPMENT REQUIRED TO PROSECUTE ALL FACETS OF THE COMBAT RECOVERY MISSION. WE ARE FORTUNATE IN THAT WE HAVE HIGHLY DEDICATED AND PROFESSIONAL PERSONNEL WHO ARE WELL TRAINED IN THEIR SPECIFIC SKILLS. THEY PROVIDE THE CAPABILITY TO GO BEYOND THE CONFINES OF THE MACHINE AND EFFECT A SUCCESSFUL RECOVERY UNDER A WIDE RANGE OF WEATHER AND TERRAIN CONDITIONS.

SECRET

CONFIDENTIAL

Director
Aerospace Studies Inst
ATTN: Archives Branch
Maxwell AFB, Alabama

SMC

CLASSIFIED BY _____
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
AND AUTOMATICALLY DOWNGRADED AT TWO YEAR
INTERVALS. DECLASSIFIED ON DECEMBER
21, 1976

*Aerospace Rescue & Recovery Service (MAC)
Briefing
Global SAR Study
23 Apr 68*

DO NOT WRITE
CATALOGED
No. 000 5823

Date _____

GROUP 4
Downgraded at 3 year
intervals; declassified
after 12 years

CONFIDENTIAL

7-2601-5

DO NOT DESTROY

U.S. AIR FORCE
AIR SERVICE (MAC)
ILLINOIS 62225
BRIEFING

No. 0005823

GLOBAL SAR STUDY (u)

Slide 1 GENTLEMEN

Shiel
00062

ALTHOUGH ARRS IS A RELATIVELY SMALL ORGANIZATION IN COMPARISON TO OTHER WORLD-WIDE COMMANDS, WE HAVE A UNIQUE MILITARY MISSION OF UNUSUAL SCOPE AND DIVERSITY. TODAY I WILL PRESENT YOU A COMPREHENSIVE OVERVIEW OF THE ENTIRE SPECTRUM OF THE AEROSPACE RESCUE AND RECOVERY SERVICE GLOBAL MISSION AND RESPONSIBILITIES.

Slide 2
Mission
00064

THE RESCUE MISSION IS DEFINED IN AFR 23-19. BASICALLY, THIS MISSION IS TO PROVIDE A WORLD-WIDE CAPABILITY TO SEARCH FOR, LOCATE AND RECOVER PERSONNEL AND AEROSPACE HARDWARE IN SUPPORT OF USAF AND OTHER DOD AEROSPACE OPERATIONS. THE PRIMARY MISSIONS WHICH FALL INTO THIS BROAD SPECTRUM MISSION STATEMENT INCLUDE:

Slide 3
Shred-C.

-MAINTAINING COMBAT AIRCRAFT RECOVERY FORCES FOR RECOVERY OF MILITARY PERSONNEL FROM HOSTILE AREAS.

-PROVIDING AIR RECOVERY FORCES FOR MANNED SPACE FLIGHT OPERATIONS IN SUPPORT OF USAF/NASA AND CIA/APOLLO AEROSPACE OPERATIONS.

-PROVIDING SAR ASSISTANCE TO ICAO SIGNATORIES IN COMPLIANCE WITH ANNEX 14 OF THE INTERNATIONAL CIVIL

AVIATION ORGANIZATION

ATCH 3

DOWNLOADED BY
EXTRACTED FROM
DOLBY 1.1

2318.203-16
12/15
13 Dec 68
HAXOC
HAXOC
HAXOC

NO 14

by
copy

7-3601-5
311

SECRET

File 5
aks
005

THE RESCUE MISSIONS DEFINED IN AFR 23-19 WHICH I COVERED EARLIER ARE FURTHER DEFINED IN THE AFM 2-36 AND SHREDDED OUT INTO THE FOLLOWING FOUR PRIMARY TASKS OR SPHERES OF OPERATIONAL ACTIVITY:

1. -PRECAUTIONARY MISSIONS WHICH INCLUDE:

A. PROVIDING ORBITS, COMMONLY REFERRED TO AS DUCKBUTTS, FOR TRANSITING JET FIGHTERS/SINGLE ENGINE RECIPROCATING AIRCRAFT OVER OCEANIC OR DESOLATE TERRAIN ROUTES OF FLIGHT. ALSO TRANSC OCEANIC INTERCONTINENTAL FLIGHTS BY THE PRESIDENT OF THE UNITED STATES ~~IN CASE OF~~ ~~EMERGENCY~~ REQUIRES RESCUE AIRCRAFT TO BE WITHIN 30 MINUTES OF ~~THE~~ ~~AREA~~ AT ALL TIMES.

B. HOME STATION SAR ALERT WHICH REQUIRES ONE PRIMARY AND ONE BACK-UP HC-130 ~~ON ALERT~~ AT EACH DESIGNATED SQUADRON TO RESPOND TO ANY AIRCRAFT/SHIP OR OTHER SAR EMERGENCY REQUIREMENTS. THE PRIMARY ALERT AIRCRAFT IS ON 30-MINUTE RESPONSE TIME WHILE THE BACK-UP AIRCRAFT HAS UP TO 2-HRS REACTION TIME.

C. LBR, LOCAL BASE RESCUE, SUPPORT WITH HH-43E HELICOPTERS, ~~WHICH~~ PROVIDES ALERT POSTURE AT FIGHTER BASES, TO ASSIST IN CRASH RESCUE OPERATIONS FROM THE RUNWAY OUT TO 75NM FROM THE BASE. THE LBR POSTURE IS ESTABLISHED BY AF ~~TO PROVIDE COVERAGE~~

SECRET

SECRET

TO PROVIDE COVERAGE AT BASES WHERE ACCIDENT OR INCIDENT POTENTIAL ARE HIGHEST. THIS IS DETERMINED BY THE TYPE AIRCRAFT ASSIGNED AND/OR NATURE OF THE OPERATION. REQUIREMENTS ARE ESTABLISHED ON THE BASIS OF MAJOR AIR COMMAND REQUESTS AND SELECTION OF BASES TO RECEIVE/RETAIN LBR UNITS IS MADE BY HC USAF.

1. OTHER ALERT REQUIREMENTS TO PROVIDE SAR COVERAGE AWAY FROM HOME STATION TO SUPPORT SPECIAL MISSIONS SUCH AS MANNED SPACE FLIGHT CONTINGENCY RECOVERY OPERATIONS, ETC.

2. THE PRECAUTIONARY POSTURE OF ARRS FORCES PROVIDES AN IMMEDIATE CAPABILITY FOR RESPONDING TO EMERGENCY MISSIONS. THESE EMERGENCY MISSIONS RANGE FROM JET FIGHTER AIRCRAFT DITCHING IN MID-OCEAN TO A MISSING BOMBER/TRANSPORT, AIRCRAFT CRASH, TO SHIPS AND PRIVATE VESSELS IN DISTRESS, TO PROVIDING DISASTER RELIEF TO STRICKEN AREAS, SUCH AS THE RECENT ARIZONA MISSION. --HERE HH-43'S PROVIDED AIRLIFT OF FOOD AND MEDICAL SUPPLIES AND EVACUATION OF NAVAJO INDIANS, ISOLATED DURING THE LATE 1967 BLIZZARD. --OR THE RESCUE HH-43'S WHICH EVACUATED PERSONNEL FROM THE ITALIAN FLOODS OF 1964 FOR WHICH THE RESCUE CREW COMMANDER RECEIVED THE CHENEY AWARD FOR HIS OUTSTANDING HUMANITARIAN ACTIONS.

SECRET

3. IN THE AREA OF

SECRET

3. IN THE AREA OF SPACE OPERATIONS WE HAVE AN EVER-INCREASING REQUIREMENT. ACTUALLY, RESCUE HAS BEEN SUPPORTING SPACE RECOVERY SINCE 1958 STARTING WITH PROJECT DISCOVERER. ALL MANNED AND MOST UNMANNED SPACE MISSIONS SINCE THE START OF PROJECT MERCURY HAVE HAD INTENSIVE RESCUE GLOBAL SUPPORT. AS AN EXAMPLE, AARS AIRCRAFT WERE THE FIRST TO ARRIVE ON STATION AND DEPLOY PARARESCUE PERSONNEL TO ASSIST THE ASTRONAUTS DURING RECOVERY OPERATIONS FOR BOTH MA-7 WHICH LANDED APPROXIMATELY 250 MILES DOWN RANGE FROM THE PLANNED LANDING AREA AND GTA-8, AS YOU RECALL, WAS ACCOMPLISHED ON EMERGENCY RE-ENTRY IN THE WEST PACIFIC INSTEAD OF THE PLANNED EAST ATLANTIC LANDING AREA.

4. OUR PRIMARY TASK, AND THE ONE TO WHICH WE ARE DEEPLY COMMITTED AT THE PRESENT TIME IN VIETNAM, IS COMBAT AIRCRAFT RECOVERY, WHICH I WILL ADDRESS IN DETAIL LATER IN HIS BRIEFING.

Slide 6 TO PERFORM THESE TASKS WE HAVE A FORCE CONSISTING OF
Map of
Locations APPROXIMATELY 4900 PERSONNEL AND 275 AIRCRAFT (UE-⁶⁶
00066
FIXED WING - 201 ROTARY WING WHICH ARE POSITIONED TO PROVIDE
MAXIMUM FLEXIBILITY AND CAPABILITY IN RESPONSE TO OUR
GLOBAL MISSION RESPONSIBILITIES. OUR FORCES, AS CAN BE SEEN
ON THIS SLIDE, ARE LOCATED IN THE CONUS, GUAM, CHINA, A,
PANAMA CANAL ZONE, ALASKA AND FOURTEEN FOREIGN COUNTRIES.

SECRET

AS SHOWN HERE, AN

SECRET

The 7 AS SHOWN HERE, THE EXTENSIVE ORGANIZATIONAL STRUCTURE IS
NECESSARY TO PROVIDE COMMAND CONTROL, SUPERVISION AND
MISSION COORDINATION OF THE ASSIGNED FORCES. OUR CURRENT
STRUCTURE CONSISTS OF ¹⁰⁴~~109~~ SUBORDINATE UNITS. IN ADDITION TO
THIS HEADQUARTERS, THERE ARE FIVE MAJOR RESCUE AND RECOVERY
CENTERS: ONE RESCUE GROUP: 17 SQUADRONS WHICH INCLUDES ONE
RESERVE SQUADRON. THE 35TH ARRSO, NOT SHOWN ON THIS CHART,
WHICH WAS CALLED UP DURING THE RECENT PUBLIC CRISIS, 72
DETACHMENTS - 16 OF WHICH ARE LBR'S, ONE HEAVY LIFT
DETACHMENT, AND FOUR RESCUE COORDINATION
CENTERS, AND SEVERAL OPERATING LOCATIONS. WHOSE RESPONSIBILITIES
RANGE FROM ADVISOR POSITIONS TO THE FIVE RESCUE RESERVE
SQUADRONS -- REPRESENTATION IN THE COAST GUARD SAR SCHOOL,
AT GOVERNOR'S ISLAND -- REPRESENTATION AT TAC/AFSTRIKE HQS,
LANGLEY AFB, VA AND T-CCS/P-RESCUE COORDINATION CENTERS
IN SEASIA DIRECTLY RESPONSIBLE TO 3DARRGP. ADDITIONALLY,
NOT SHOWN ON THIS CHART, THERE IS ONE PROVISIONAL SQUADRON
FOR CONTROL OF ARRS FORCES IN KOREA, AND FOUR LBR PROVISIONAL
DETACHMENTS ACTIVATED IN KOREA IN DIRECT RESPONSE TO THE
RECENT PUBLIC CRISIS AND ARE DESIGNATED PROVISIONAL UNITS
TO REFLECT THEIR TEMPORARY ACTIVATION STATUS. DESPITE
THE FACT THAT ALL FIVE MAJOR REGIONAL CENTERS ARE

DIRECTLY UNDER THE

SECRET

SECRET

DIRECTLY UNDER THE COMMAND AND CONTROL OF THIS HQ, THEIR
LEVEL OF RESPONSIBILITY IN THEIR ASSIGNED REGIONS VARY
ACCORDING TO THE UNIFIED/SPECIFIED COMMAND POLICY IN THE
GEOGRAPHICAL AREA OF ASSIGNMENT.

Slide 8
CONUS Org
IN THE CONTINENTAL LIMITS OF THE UNITED STATES, OR MORE
COMMONLY REFERRED TO AS THE INLAND REGION, THE COMMANDER
OF RESCUE HAS BEEN APPOINTED BY THE CHIEF OF STAFF AIR FORCE
AS THE EXECUTIVE AGENT FOR AAR UNDER THE PROVISIONS OF AFM
64-2 (NATIONAL SEARCH AND RESCUE MANUAL WHICH IS A JOINT
SERVICES PUBLICATION). BRIEFLY, THIS MEANS THAT WITHIN THE
CONUS WE ARE CHARGED WITH THE COORDINATION OF ALL SEARCH
AND RESCUE ACTIVITIES. LET ME EMPHASIZE THAT OUR MISSION
IN THE CONUS IS COORDINATION OF ALL SEARCH AND RESCUE
ACTIVITIES. BASICALLY, THE ACTUAL SEARCH RESPONSIBILITY
RESTS WITH THE INDIVIDUAL STATE GOVERNMENTS WHO PROVIDE
AIR AND GROUND NATIONAL OR ARMY CIVIL AIR PATROL, POLICE,
SHERIFF, FIRE DEPARTMENTS, LOCAL SKIN DIVERS OR ANY OTHER
NUMBER OF ORGANIZATIONS IN THE STATE THAT ARE CAPABLE OF
PROVIDING SEARCH ASSISTANCE. AAR HAS THREE
REGIONAL CONUS CENTERS WHO ARE RESPONSIBLE FOR THE
COORDINATION OF THE SEARCH AND RESCUE ACTIVITIES IN THEIR
RESPECTIVE AREAS OF OPERATION, AND IN SUPPORT OF THIS
RESPONSIBILITY HAVE FORMULATED AGREEMENTS AND
MAINTAIN CLOSE COORDINATION

SECRET

SECRET

MAINTAIN CLOSE COORDINATION WITH THE INDIVIDUAL STATE GOVERNMENT SAR AGENCIES TO FACILITATE THE PROSECUTION OF SEARCH AND RESCUE MISSIONS. ADDITIONALLY, THESE CENTERS HAVE ADMINISTRATIVE AND TECHNICAL CONTROL OVER ³² LBR DETS. THE DETACHMENTS, NORMALLY CONSIST~~ING~~ OF 2 HH-43B HELICOPTERS AND APPROXIMATELY 11 PERSONNEL, ^{THE} ARE RESPONSIBLE FOR CONDUCTING RESCUE MISSIONS WITHIN A 75 NM RADIUS FROM THEIR BASE OF ASSIGNMENT, ^{TWO} IN DIRECT RESPONSE TO THE BASE COMMANDER'S RESPONSIBILITY FOR CRASH RESCUE/RECOVERY OF USAF AND OTHER DOD ~~ARMY~~ PERSONNEL. THESE LBR FORCES ARE ALSO AVAILABLE TO BE CALLED ON BY THE CENTERS IN RESPONSE TO STATE GOVERNMENT SAR REQUIREMENTS.

HO ARRS ALSO HAS COMMAND, ADMINISTRATIVE, TECHNICAL AND OPERATIONAL CONTROL OVER 4 CONUS FIXED WING HC-130 SQUADRONS, THE 41ST AT HAMILTON AFB, CALIF; THE 54TH ARRSQ AT PEASE AFB, N.H.; AND THE 55TH ARRSQ AT KINDLEY AB, BERMUDA - ALL OF WHICH PROVIDE CAPABILITY TO SUPPORT USAF AND DOD ~~PERSONNEL AND HARDWARE~~ SEARCH, LOCATION AND RECOVERY REQUIREMENTS IN NORTH AMERICA, SOUTH AMERICA AND ADJACENT OCEANIC AREAS, ~~AND~~ THE 48 ARRSQ (TNG) AT EGLIN AFB, FLA. ~~WHICH~~ IS THE ARRS TRAINING SQUADRON FOR SPECIALIZED TRAINING OF

SECRET

SECRET

SPECIALIZED TRAINING OF AIRCREW AND SUPPORT PERSONNEL.

Slide 9 THE NEXT AREA FOR CONSIDERATION IS THE ATLANTIC AEROSPACE
AARRC Org:

RESCUE AND RECOVERY CENTER LOCATED AT RAMSTEIN AB,

GERMANY. THIS CENTER HAS 12 LBR DETACHMENTS LOCATED

IN THE UNITED KINGDOM, GERMANY, ITALY, SPAIN, AND TURKEY.

~~AND~~ THREE RESCUE AND RECOVERY SQUADRONS ASSIGNED AS

FOLLOWS: 57 ARRSO, LAJES FLD, AZORES; THE 58 ARRSO,

WHEELUS AB, LIBYA; AND THE 67 ARRSO, MORON AB, SPAIN.

ALTHOUGH ATLANTIC ARRC IS DESIGNATED A CENTER, ORGANIZATION-

ALLY ITS FUNCTIONS AND RESPONSIBILITIES HAVE BEEN UPGRADED

COMMENSURATE TO WING LEVEL.

Slide 10 UNITED STATES COMMANDER IN CHIEF, EUROPE (USCINCEUR) AS
SAR

Struct. THE UNIFIED COMMANDER IN CHARGE OF ALL U.S. FORCES IN

00463 EUROPE IS RESPONSIBLE FOR SAR SUPPORT OF U.S. FORCES IN

HIS AREA BY THE AUTHORITY VESTED IN HIM BY THE JOINT CHIEFS

OF STAFF. JCS PUB 2, ~~WHICH~~ STATES, "THE AREA COMMANDER HAS

PRIMARY AUTHORITY FOR SAR WITHIN HIS AREA. THE AREA

COMMANDER MAY DELEGATE SAR AUTHORITY TO SUBORDINATE

COMMANDERS AND BY MUTUAL AGREEMENT TO COAST GUARD OR

MILITARY COMMANDERS OF OTHER COMMANDS. THROUGH A

FORMAL SAR AGREEMENT WITH THE COMMANDER IN CHIEF, ~~OF~~

U.S. FORCES, ^{IN THE} MIDDLE EAST, AFRICA, ^{AND} SOUTH OF THE SAHARA, THE U.S.

~~COMMANDER IN CHIEF, EUROPE~~
~~COMMANDER IN CHIEF, EUROPE~~ (USCINCEUR) HAS ALSO ACCEPTED

RESPONSIBILITY FOR SAR

SECRET

SECRET

RESPONSIBILITY FOR SAR IN AFRICA, THE MIDDLE EAST, AND
INDIAN OCEAN TO 90° E LONGITUDE.

THE U.S. COMMANDER IN CHIEF, EUROPE
(USCINCEUR) IN TURN, HAS APPOINTED THE COMMANDER, UNITED
STATES AIR FORCES, EUROPE -- (CINCPAC) AS THE EXECUTIVE
AGENT FOR SAR IN THE TWO AREAS OF RESPONSIBILITY.

The COMMANDER IN CHIEF, USAFE

~~CINCPAC~~ HAS FURTHER DESIGNATED THE ATLANTIC AEROSPACE
RESCUE AND RECOVERY CENTER AS THE ~~CINCPAC/CINCPAC~~

U.S. AIR FORCE

JOINT SERVICE SAR COORDINATOR. ESSENTIALLY, THIS MEANS

THE ATLANTIC

THAT ~~ATLANTIC~~ COORDINATES AND/OR CONTROLS AND PROVIDES

FORCES AS APPROPRIATE FOR ALL U.S. MILITARY SAR OPERATIONS

IN EUROPE - AFRICA AND MIDDLE EAST TO 90° E LONGITUDE.

THE ATLANTIC ~~USAF~~ ALSO PROVIDE SAR FORCES TO FOREIGN

GOVERNMENT IN RESPONSE TO ANNEX 12 OF THE ~~ICAO~~ DOCUMENT

AND OTHER ICAO NON-SIGNATORY FOREIGN GOVERNMENTS WITHIN

CAPABILITY AT THE REQUEST OF THE FOREIGN GOVERNMENT.

ANOTHER POINT WORTHY OF MENTION IS THAT THE NATIONAL STATES
HAVE SOVEREIGN RIGHTS WITHIN THEIR TERRITORIAL BOUNDARIES.

ITALY, SPAIN, FRANCE, GERMANY, UNITED KINGDOM, THE BENELUX

AND SCANDINAVIAN COUNTRIES IN PARTICULAR HAVE HIGHLY

SOPHISTICATED AND PROFESSIONAL SAR FORCES TO MEET THEIR

REQUIREMENTS. THESE

SECRET

SECRET

REQUIREMENTS. THESE NATIONAL STATES AND OTHER ICAO SIGNATORIES IN THE EUROPEAN -- AFRICAN AND MIDDLE EAST REGIONS, IN THE MAJORITY OF INSTANCES, ARE FULLY COOPERATIVE AND RESPONSIVE TO US ~~SAR~~ PARTICIPATION IN SAR EFFORTS ORIENTED TOWARDS SEARCH, LOCATION AND RECOVERY OF USAF AND OTHER U.S. DOD OBJECTIVES. WHEN THE SAR ^{MISSION} ~~OBJECTIVE~~ IS A USAF OR OTHER DOD OBJECTIVE, THROUGH FORMALIZED AND IN SOME INSTANCES INFORMAL AGREEMENTS, THE NATIONAL STATE IN WHOSE TERRITORY THE SAR EFFORT IS BEING CONDUCTED CALLS ON U.S. SAR FORCES FOR PARTICIPATION AND ASSIGNS THESE SAR FORCES THE AREA OF HIGHEST PROBABILITY.

IN TURN, THE U.S. SAR FORCES ARE FULLY RESPONSIVE TO SUPPORTING THE NATIONAL STATE SAR AGENCIES UPON REQUEST. NUMEROUS INSTANCES OF U.S. ASSISTANCE TO FOREIGN GOVERNMENT SAR REQUIREMENTS ARE RECORDED IN THE ANNALS OF RESCUE HISTORY -- SUCH AS THE DISASTER RELIEF MISSIONS FLOWN IN SUPPORT OF ITALIAN, NORTH AFRICAN AND BENELUX FLOOD VICTIMS, PARTICIPATING IN A SEARCH FOR AND IMMEDIATE LOCATION OF A BRITISH AIRLINER THAT CRASHED IN THE AUSTRIAN ALPS,-- EVACUATION FROM ISOLATED VILLAGES OF CRITICALLY ILL-INJURED CHILDREN AND ADULTS REQUIRING IMMEDIATE MEDICAL TREATMENT, AND SO THE RECORD GOES ON AND ON.

ANOTHER PECULIARITY WHICH

SECRET

SECRET

ANOTHER PECULIARITY WHICH EXISTS IN THE ATLANTIC RESCUE AREA OF RESPONSIBILITY IS THE ASSIGNMENT OF SAR RESPONSIBILITY OF THE 57 ARRSO AT LAJES FIELD, AZORES. TECHNICALLY, THE 57 ARRSO IS THE SAR COORDINATOR FOR COMMANDER, U.S. FORCES AZORES - ~~COMUSMACV~~ - AND AS SUCH HAS THE PRIMARY RESPONSIBILITY FOR SAR IN ^{THAT} THE ~~COMUSMACV~~ AREA OF RESPONSIBILITY, WHICH ENCOMPASSES THE EAST ATLANTIC BUT EXCLUDES THE LAND AREAS OF EUROPE AND AFRICA. HOWEVER, THROUGH A JOINT AGREEMENT CONSUMMATED BETWEEN USAF AND ~~COMUSMACV~~ ^{the Commander, U.S. Forces Azores}, 57 ARRSO FORCES WILL BE MADE AVAILABLE TO SUPPORT USAF SAR REQUIREMENTS AND VICE VERSA.

Slide 11 PACIFIC AEROSPACE RESCUE AND RECOVERY CENTER LOCATED AT PAC ARRC
HICKAM AFB, HAWAII, UNLIKE HQ ARRS OR ATLANTIC, IS A UNI-SERVICE SAR CENTER FOR THE CINC, PACIFIC AIR FORCES, (CINCPACAF.) SPECIFICALLY, PARRC'S RESPONSIBILITY IS TO PROVIDE THE AIR COMPONENT SAR CAPABILITY TO THE JOINT SAR CENTER COMMANDED BY U.S. NAVY PACIFIC AS DIRECTED BY U.S. COMMANDER IN CHIEF ~~PACIFIC~~ PACIFIC, CINCPAC. HOWEVER, DUE TO THE INHERENT CAPABILITY AND POSTURE OF THE ASSIGNED PARRC FORCES, THEY SUPPORT ALL USAF AND OTHER DOD AGENCY SAR REQUIREMENTS IN THE CINCPAC AREA OF RESPONSIBILITY. PARRC HAS FIVE FIXED-WING SQUADRONS ASSIGNED, 31 ARRSO, CLARK AFB, P.I.;

33D ARRSO NAHA AB.

SECRET

SECRET

33D, ARRSQ NAHA AB, OKINAWA; THE 36TH ARRSQ TACHIKAWA AB, JAPAN; THE 76TH ARRSQ AT HICKAM AFB, HAWAII; AND THE 79 ARRSQ, ANDERSEN AFB, GUAM. ADDITIONALLY, THERE ARE ¹¹ ~~8~~ ASSIGNED DETACHMENTS - ~~8~~ ⁸ OF WHICH ARE LBR'S AT ~~KADENA AB, OKINAWA, MIYAWA AND YOKOTA AB'S, JAPAN, AND~~ ~~OSAN AB, KOREA~~ ^{THREE} THE OTHER ~~TWO~~ DETACHMENTS AT FUCHU AB, ^{AND OSAN KOREA} JAPAN ~~AND~~ CLARK AB, P.I., ARE SAR COORDINATION CENTERS. ~~THE 164TH PROVISIONAL AEROSPACE RESCUE AND RECOVERY SQUADRON, WITH ITS 4 PROVISIONAL LBR DETACHMENTS IN KOREA, ALSO ARE ASSIGNED TO PARRC.~~

Slide 12 THE MOST PROMINENT UNIT ASSIGNED TO PARRC IS THE 3 ARRGP IN 3 ARRGp SEASIA. THE 7TH AF, AS USMACV SAR COORDINATOR ESTABLISHED ^(as 1st Lt. assistance command Vietnam) THE JOINT SEARCH AND RESCUE CENTER ^{referred to as JSARC.} (FIR). IN ACCORDANCE WITH 7 AFM 64-2 DESIGNATES THE 3 GP AS THE JOINT SERVICES SAR COORDINATION FOR U.S. FORCES IN THE 7TH AF FLIGHT INFORMATION REGION (FIR) WHICH INCLUDES ALL OF SEASIA, AS WELL AS PERFORMING THE PRIMARY DUTY OF COMBAT AIRCREW RECOVERY. THE 3 ARRGP HAS TWO SUB-RESCUE COORDINATION CENTERS AT UDORN AB, THAILAND, AND ^{SAN TRAP} ~~MONKEY MOUNTAIN~~, RVN, ^{and RCL's} ~~THAT~~ ARE AN EXTENSION OF AND PROVIDE REAL-TIME CONTROL OF SAR FORCES TO THE 7 AF JOINT SEARCH AND RESCUE CENTER OPERATED BY 3 ARRGP AT TAN SON NHUT, ~~VIETNAM~~. THE 3 ARRGP.

ALSO HAS THE 37 ARRSQ

SECRET

SECRET

ALSO HAS THE 37 ARRSO HH-3E SQUADRON AT DA NANG AB, FOR IN-COUNTRY -- GULF OF TONKIN ACR AND SAR CAPABILITY; THE 38 ARRSO LBR HH-43 SQUADRON AT TAN SON NHUT AB, RVN, WITH 14 LBR DETS LOCATED THROUGHOUT RVN AND THAILAND; THE 39 ARRSO HC-130 SQUADRON AT TUY HOA RVN, AND THE 40 ARRSO HH-53 SQUADRON AT UDORN WITH DET 1 HH-3ES AT NAKHON PHANOM AB, THAILAND TO PROVIDE OUT OF COUNTRY ACR-SAR CAPABILITY.

Revised + 8
has

~~NOW THAT I HAVE DISCUSSED ORGANIZATION,~~ THE NEXT TOPIC IS AIRCRAFT, RECOVERY SYSTEMS AND THEIR CAPABILITY; BUT, BEFORE I ADDRESS THIS SUBJECT, LET ME DIGRESS FOR A MOMENT AND GIVE YOU A QUICK RECAP ON RESCUE HISTORY AND FUTURE PROGRAMS:

Slide 13 FROM THE INCEPTION OF RESCUE IN 1946 THROUGH THE EARLY 1960'S
History
00089 ARRS HAS BEEN ASSIGNED AIRCRAFT WITH LIMITED RESCUE AND RECOVERY CAPABILITY. STARTING WITH THE CATALINA FLYING BOAT (PBV) THRU SB-17'S, SC-47'S, HC-54'S AND MOST RECENTLY HC-97'S OUR RECOVERY CAPABILITY WAS ALMOST NON-EXISTENT. DURING THE PAST 15 YEARS THE RESCUE FORCE STRUCTURE DECREASED FROM A PEAK 50 SQUADRONS AND 12 GROUPS WITH 12,000 PERSONNEL ASSIGNED AT THE END OF THE KOREAN CONFLICT, TO 11 SQUADRONS, NO GROUPS, ONLY 1400 PERSONNEL

AND 69 AIRCRAFT -

SECRET

SECRET

AND 69 AIRCRAFT - NONE OF WHICH WERE HELICOPTERS.

IN 1961 RESCUE WAS ASSIGNED THE LBR MISSION WHICH WAS THE INITIAL STEP IN THE EXPANSION OF OUR GLOBAL MISSION AND RESPONSIBILITIES. THE MODERNIZATION AND EXPANSION OF RESCUE FORCE CAPABILITY WAS ACCELERATED BY PARTICIPATION IN MANNED SPACE FLIGHT RECOVERY OPERATIONS STARTING IN 1961.

HOWEVER, THE ONE MILESTONE MARKING OUR GREATEST LEAP FORWARD ^{LAS} ¹⁹⁶⁴ OUR COMMITMENT TO THE CURRENT SEASIA CONFLICT, ~~RESCUE~~ TODAY, AS I MENTIONED EARLIER, RESCUE HAS ¹⁰⁴ ~~109~~ UNITS LOCATED AROUND THE WORLD OF WHICH ⁸³ ~~84~~ ARE OPERATIONAL FLYING ORGANIZATIONS, CONSISTING OF 17 SQUADRONS AND 66 LBR DETS WITH A TOTAL UE AIRCRAFT AUTHORIZATION OF 55 HC-130'S, ³ ~~4~~ HU-16'S, ⁵¹ ~~52~~ HH-53 S/HH-3E'S AND 150 HH-43'S, PLUS 8 HC-97'S IN THE 305 ARRSO RESERVE SQUADRON RECENTLY CALLED TO ACTIVE DUTY.

FUTURE PROGRAMS, WHICH I WILL DISCUSS IN DETAIL LATER, INCLUDE: INCREASED HC-130 AND HH-53 AUTHORIZATIONS,

REPLACEMENT LBR VEHICLES, AND INTRODUCTION OF A COMBAT

AIRCREW RECOVERY SYSTEM AIRCRAFT, ^{IT IS ALSO ANTICIPATED THAT THE} ~~AS WELL AS ESTABLISHING~~ ^{POST-SEA CRAFT} ~~POST-SEA CRAFT~~ ^{WILL BE ESTABLISHED} A CONTINGENCY RECOVERY GROUP WITH TWO SQUADRONS IN THE

CONUS TO RESPOND TO

SECRET

SECRET

CONUS TO RESPOND TO GLOBAL CONTINGENCY OPERATIONS~~AS~~ OR EXERCISES.

AT THE PRESENT TIME AND WELL INTO THE FUTURE, EMPHASIS IS BEING PLACED ON INCREASING ^{THE GLOBAL} ~~RESCUE'S~~ SEARCH, RESCUE AND RECOVERY ~~CONTROL~~ PEACE AND WARTIME CAPABILITY. ALTHOUGH WE WILL NEVER REACH THE ORGANIZATIONAL STRUCTURE EXPERIENCED IN THE 1950 - 1953 TIME PERIOD, OUR ABILITY TO PERFORM THE ASSIGNED GLOBAL MISSIONS HAS FAR SURPASSED ANY PERIOD IN RESCUE'S HISTORY. THIS IS PRIMARILY ATTRIBUTED TO EMPLOYMENT OF THE LBR HH-43 AND THE DEVELOPMENT OF LONG-RANGE, HEAVY LIFT HH-3E/HH-53 HELICOPTERS.

Slide 14
Saves
00090

THE HISTORICAL COMPARATIVE ANALYSIS OF RESCUE'S SAVE STATISTICS IS SHOWN ON THIS CHART. FROM MAY 1946, THE INCEPTION OF RESCUE; THROUGH END 1964 ARRS FORCES HAVE COMPILED 3840 SAVES OF WHICH 996 WERE ACCOMPLISHED IN KOREAN OPERATIONS 1950 - 1953. ADDITIONALLY, DURING THIS PERIOD ARRS CONTRIBUTED TO 7660 SAVES BY PROVIDING MISSION CONTROL AND/OR SEARCH/RECOVERY CAPABILITY TO OTHER NATIONAL/INTERNATIONAL SAR AGENCIES. DURING THE PERIOD JULY 1964 THROUGH DEC 1966, THE ARRS SAVES INCREASED BY 1025 OF WHICH 642 WERE ACCOMPLISHED IN SEASIA OPERATIONS, ^{DURING THIS SAVE} ~~WAS~~ ^{PERIOD} ~~PROVIDED~~ ~~PROVIDING~~ ASSISTANCE TO OTHER NATIONAL/INTERNATIONAL

WS

SAR AGENCIES IN AN

SECRET

SECRET

SAR AGENCIES IN AN ADDITIONAL 630 SAVES. THE SIGNIFICANT POINT HERE IS THAT IN 1964 ARRS ENTERED SEASIA OPERATIONS WITH ONLY TDY HU-16'S, HC-54'S, AND HH-43'S, YET THESE FORCES SLOWLY BUILT UP AND AUGMENTED BY CH-3C HELICOPTERS THROUGH DEC 66 WERE ABLE TO ACCOUNT FOR WELL OVER 50% OF THE TOTAL ARRS GLOBAL SAVES DURING THIS ~~PERIOD~~ PERIOD. IN 1967 HC-130P'S AND HH-3E'S WERE INTRODUCED INTO THE ARRS ~~INVENTORY~~ INVENTORY AND, AS CAN BE SEEN ON THE CHART, RESCUE COMPILED 945 SAVES OF WHICH 646 WERE ACCOMPLISHED IN SEASIA ~~OPERATIONS~~. TO DATE IN 1968, ARRS HAS ALREADY ACCOUNTED FOR ~~400~~ SAVES, ~~200~~ IN SEA. THIS BRINGS THE TOTAL ARRS SAVES TO ~~1000~~ OF WHICH ~~200~~ HAVE BEEN CONDUCTED IN SUPPORT OF COMBAT OPERATIONS, PLUS ASSISTING IN ~~800~~ SAVES BY OTHER AGENCIES FOR A TALLY OF ~~1000~~ LIVES SAVED SINCE 1946, WHICH IN ITSELF IS QUITE AN IMPRESSIVE HISTORY. AS YOU WILL NOTE THERE ARE NO STATISTICS IN THE SAVES ASSIST COLUMN FOR 1967 ON. THIS IS A RESULT OF A CHANGE IN DEFINITION OF SAVES WHERE IN ONLY THOSE SAVES BY ARRS EQUIPMENT IS USED FOR STATISTICAL PURPOSES FOR ACCREDITING SAVES. AS A FURTHER BREAKOUT THE ACTUAL SEA SAVE HISTORY IS REFLECTED ON THIS CHART.

~~Slide 14a~~ HOWEVER, OUR PRIME CONCERN IS NOT LOOKING BACK AT PAST
SEA Saves
Breakout ACCOMPLISHMENTS BUT RATHER TO DEVELOP A DYNAMIC,

FLEXIBLE FORCE CAPABLE OF RESPONDING TO ANY ^{AND} ALL CURRENT
AND FUTURE ~~SEARCH~~ SEARCH, RESCUE AND RECOVERY

REQUIREMENTS. ~~THE~~ THIS CAN ONLY

SECRET

SECRET

WORKING PAPERS

~~REQUIREMENTS~~, BY EQUIPMENT MODERNIZATION AND STREAMLINING
OUR ORGANIZATION TO KEEP PACE WITH THE CONTINUALLY CHANGING
SCOPE AND DIVERSITY OF OUR GLOBAL MISSION RESPONSIBILITIES.

Slide 15
HC-130
00050

THE FIRST STEP IN DEVELOPMENT OF A TRUE GLOBAL RESCUE FORCE
WAS REALIZED WITH THE INTRODUCTION OF THE HC-130 AIRCRAFT
INTO THE RESCUE INVENTORY IN 1964. FOR THE FIRST TIME IN
RESCUE HISTORY WE RECEIVED A NEW, FIRST LINE, FIXED WING,
AIRCRAFT SPECIFICALLY EQUIPPED FOR OUR MISSION REQUIREMENTS.
THIS AIRCRAFT WAS DESIGNED TO FLY AT HIGH ALTITUDES - CRUISE
AT 290 KTS TAS, - CARRY A MAXIMUM GROSS WEIGHT OF 175,000 LBS
WITH A CRUISING RANGE OF 4500NM ^{IT IS} EQUIPPED WITH SPECIALIZED
SOPHISTICATED NAVIGATION AND ELECTRONIC SEARCH, TRACKING
AND HOMING DEVICES -- AS WELL AS AIR-TO-AIR AND SURFACE-TO-
AIR RECOVERY SYSTEMS. THIS AIRCRAFT PROVIDED AROUND THE
INITIAL GLOBAL SEARCH, RESCUE AND RECOVERY SYSTEM.

Slide 16
HC-130
Surface
to Air
00076

THE SURFACE TO AIR RECOVERY SYSTEM WAS DESIGNED TO ALLOW
AN AIRCRAFT TO RECOVER PERSONEL AND MATERIEL FROM THE
EARTH'S SURFACE. IT CAN RECOVER A MAXIMUM WEIGHT OF 500
LBS (OR TWO 250 LB MEN) FROM ELEVATIONS BETWEEN SEA LEVEL
AND 6000 FT. AT ELEVATIONS BETWEEN 6000 FT AND 16,000 FT IT
IS RESTRICTED TO 250 LBS. ON 22 JUL 66 ^{the 54th Rescue Sq.} ~~THE 54TH RESCUE SQ.~~
CONDUCTED THE FIRST USAF-DIRECTED MISSION UTILIZING THIS
SYSTEM TO RECOVER AN INSTRUMENT PACKAGE FROM EASTER

SECRET

ISLAND IN THE SOUTHEAST

SECRET

ISLAND IN THE ^{THIS WAS} ~~IN~~ SUPPORT OF A CLASSIFIED PROJECT. THE MISSION PROFILE WAS AS FOLLOWS:

THE HC-130 DEPARTED LIMA, PERU, FLEW 2041 NM TO EASTER ISLAND AND AIR-DROPPED THE GROUND STATION. THE PERSONNEL AT EASTER ISLAND ERECTED THE GROUND STATION IN LESS THAN 30 MINUTES. THE HC-130 RECOVERED THE INSTRUMENT PACKAGE AND RETURNED TO LIMA, PERU. THE ENTIRE MISSION WAS FLOWN IN 15 HRS, 55 MINUTES FOR A NON-STOP DISTANCE OF 4082NM. UPON LANDING AT LIMA, THE HC-130 STILL HAD APPROXIMATELY 4 HRS FUEL REMAINING. SINCE THAT TIME THIS SYSTEM HAS BEEN USED FOR TEN OPERATIONAL RECOVERIES OF HARDWARE, AND NUMEROUS TEST RECOVERIES IN CONJUNCTION WITH US NAVY AND US ARMY PROGRAMS. LET ME EMPHASIZE AT THIS POINT, HOWEVER, THAT THIS SYSTEM, ALTHOUGH MAN-RATED, IS CONSIDERED AN EMERGENCY RECOVERY SYSTEM, ^{ITS} ~~AND~~ AUTHORITY FOR USE FOR A LIVE PICK-UP MUST BE GRANTED BY HQ ARRS ON EACH INDIVIDUAL REQUIREMENT. | TO THIS DATE, THIS SYSTEM HAS NOT BEEN EMPLOYED FOR AN OPERATIONAL LIVE PICK UP. ALTHOUGH WE HAVE THIS CAPABILITY AND EQUIPMENT ON OUR HC-130'S IN SEASIA, EMPLOYMENT OF THIS ~~RECOVERY~~ ^{IN SEA} SYSTEM IS LIMITED DUE TO DENSE JUNGLE AND HOSTILE ENVIRONMENT. ^{At this time in a test to show} ~~on given demonstration~~ ^{of two ways out of which was} ~~the ARRS Command~~ THE HC-130 ALSO HAS THE AIR-TO-AIR RECOVERY SYSTEM WHICH IS DESIGNED FOR MID-AIR RECOVERY OF PARACHUTED OBJECTS

FILM

Slide 17

Air/Air

00077

SECRET

WEIGHING 65 - 2500 LBS

SECRET

65 - 2500 LBS AT ALTITUDES BETWEEN 15,000 FT AND SEA LEVEL.

AT THE PRESENT TIME, THIS SYSTEM IS QUALIFIED FOR OPERATIONAL

USE FOR WEIGHTS UP TO 550 LBS. ^{48 lb} IN ADDITION TO THE TRAINING

HC-130'S ARE EQUIPPED WITH ^{in addition to} SQUADRON ~~AL-8000~~, THIS SYSTEM, ~~IS OPERATIONAL~~ PROGRAMMED

INTO THE 41 ARRSO, 36 ARRSO AND 67 ARRSO. TO DATE ARRS HAS

MADE ~~48~~ SUCCESSFUL RECOVERIES WITH THIS SYSTEM OUT OF ~~71~~

ATTEMPTS IN SUPPORT OF AIR WEATHER SERVICE, ^{AND AIR WEATHER SERVICE} CLASSIFIED

MISSIONS. THE RECOVERIES WERE ACCOMPLISHED IN AREAS

RANGING FROM ALASKA TO BRAZIL AND ARE PROGRAMMED FOR

FUTURE MISSIONS IN JAPAN AND NORWAY.

Slide 18
Recovery
Limita-
tions
00091

ALTHOUGH THE HC-130 IS A RELATIVELY HIGH SPEED AIRCRAFT WITH

LONG RANGE SEARCH AND LOCATION CAPABILITIES, IT IS

EXTREMELY LIMITED IN BOTH PERSONNEL AND HARDWARE RECOVERY

MISSIONS. BOTH THE SURFACE TO AIR AND AIR TO AIR SYSTEMS

ARE WEIGHT LIMITED IN THE RECOVERY ROLE. THE AIR TO AIR

SYSTEM CANNOT BE PRACTICALLY EMPLOYED EXCEPT ON

PREPLANNED, WELL-COORDINATED MISSIONS. THE SURFACE TO

AIR IS LIMITED IN RESPECT TO NUMBERS OF PERSONNEL WHICH

CAN BE RECOVERED AT ANY ONE TIME; THE RECOVERY TERRAIN

FEATURES AND THE PHYSICAL CONDITION OF THE RECOVEREE.

NOT TO MENTION THE ^{MENTAL STATE} ~~PHYSICAL STATE~~ OF THE

RECOVEREE ANTICIPATING BEING SUSPENDED BELOW AN AIRCRAFT

AT 120 MILES PER HR

SECRET

SECRET

AT 120 MILES PER HR ON THE END OF A 450-FT NYLON LINE. ADDITIONALLY, THIS SYSTEM IS LIMITED IN THE MAJORITY OF THE CURRENT SEA ACR REQUIREMENTS. PINPOINT LOCATION OF THE DOWNED AIRCREW MEMBER AND ACCURATE AERIAL DELIVERY OF THE RECOVERY STATION IN THE DENSE JUNGLE TERRAIN IS PRACTICALLY IMPOSSIBLE. A FURTHER LIMITATION IN THE ACR ROLE IS EXPERIENCED WITH THE TIME REQUIRED TO ERECT THE GROUND STATION, ^A MARKER BALLOON WHICH COMPROMISES THE SURVIVORS POSITION AND THE EXTENDED EXPOSURE OF THE HC-130 ^A AIRCRAFT IN A HOSTILE ENVIRONMENT DURING SEARCH, LOCATION DELIVERY AND RECOVERY.

Slide 19
HH-3
00070

THESE LIMITATIONS ON THE HC-130 RECOVERY SYSTEMS LEAD US TO THE NEXT EVOLUTION IN THE ~~RESCUE~~ GLOBAL RECOVERY CAPABILITY OF THE LONG RANGE, HEAVY-LIFT HELICOPTERS. INITIALLY, ~~THE~~ ARRS RECEIVED AUTHORIZATIONS FOR CH-3C HELICOPTERS IN 1964. ~~WHICH~~, ALTHOUGH LONG RANGE IN TERMS OF ROTARY WING STATE-OF-THE-ART, ^{THEY} COULD NOT PROVIDE THE RANGE NECESSARY TO RESPOND TO THE CURRENT SEASIA OUT-OF-COUNTRY ACR REQUIREMENTS, TO PROVIDE FOR RANGE EXTENSION OF THIS HELICOPTER, MAC AND ARRS ENVISIONED THE APPLICATION OF IN-FLIGHT REFUELING FOR HELICOPTERS. THREE YEARS AGO THIS CONCEPT WAS CONSIDERED IMPRACTICAL AND IMPOSSIBLE BY MOST PEOPLE IN THE AVIATION

SECRET

SECRET

PEOPLE IN THE AVIATION FIELD. HOWEVER, IN 1966 A CH-3C
EQUIPPED WITH A DUMMY PROBE PROVED THE FEASIBILITY OF HELI-
COPTER IN-FLIGHT REFUELING BY MAKING PRACTICE DRY HOOK-UPS
~~FORMATION~~ FLYING WITH A ~~WING~~ KC 130, ~~AT CHERRY HOOK, N.C.~~
THIS TEST PROVIDED THE IMPETUS TO MOVE AHEAD WITH A PROGRAMME
DEVELOPMENT OF A FULL CAPABILITY COMMONLY REFERRED TO
TODAY AS THE "RESCUE TEAM" CONCEPT UTILIZING HC-130P TO

Slide 20 PROVIDE IN-FLIGHT REFUELING FOR ARRS HELICOPTERS. THE
HH3E/HC-130P
00075 ✓ ACTUAL GLOBAL OPERATIONAL CAPABILITY OF THIS TEAM CONCEPT

Slide 21
NY 1015 WAS ~~DEMONSTRATED~~ PROVEN ON 1 JUN 67, WHEN TWO ~~ARRS~~ HH-3E
00092 ✓ HELICOPTERS, ~~RECOVERED FROM DOWNED AIRCRAFT BY HC-130P~~

~~AIRCRAFT~~, FLEW NON-STOP ~~MISSION~~ FROM NEW YORK TO PARIS IN
30 HRS AND 48 MINUTES. NEEDLESS TO SAY, THIS EVOLUTIONARY
BREAK-THROUGH HAS FOCUSED ATTENTION ON THE HELICOPTER/
ROTARY WING AIRCRAFT AS THE PRIME GLOBAL ARRS VEHICLE.
THIS NEW TECHNIQUE
AND HAS REQUIRED A RADICAL REVISION IN AIR FORCE THINKING
TO DEVELOP NEW APPROACHES IN CONCEPTUAL EMPLOYMENT OF
THIS HIGHLY FLEXIBLE "TEAM" CAPABILITY.

OPERATIONAL EMPLOYMENT OF THE HH-3E HIGHLIGHTED THREE
THE AIRCRAFT, THESE WERE
SIGNIFICANT LIMITATIONS IN ~~THE RECOVERY VEHICLES~~ WEIGHT
RESTRICTIONS, ALTITUDE LIMITATIONS, AND A RESULTANT FACTOR
DERIVED FROM WEIGHT AND

SECRET

SECRET

DERIVED FROM WEIGHT AND ALTITUDE LIMITATIONS ^{THIS} LACK OF
GROWTH POTENTIAL. ^{THE HH-3E BROUGHT ABOUT WHICH} ~~THE NEXT STEP WAS THE~~
~~THIS AIRCRAFT~~

Slide 22 INTRODUCTION OF THE HH-53, ~~WHICH~~ ^{THIS AIRCRAFT} HAS GREATER
HH53 00071 ✓ PERFORMANCE PARAMETERS AND IS CAPABLE OF SURVIVING IN A

~~AND~~ SMALL ARMS/ANTI-AIRCRAFT ~~END-HORROR~~ ENVIRONMENT.
HH53/HG130

00093 COMPARATIVE PERFORMANCE PARAMETERS AND CONFIGURATION

Slide 23 OF THE HH-3E VERSUS THE HH-53 ARE SHOWN ON THIS CHART. NOTE THE
Comparison INCREASED SPEED, RANGE AND ARMAMENT OF THE HH-53
00093 ~~DIFFERENCE BETWEEN CRAFT~~

AT THIS POINT I WOULD LIKE TO SHOW YOU A SHORT FILM THAT
FILM WILL GIVE YOU A CLEARER PICTURE OF THE AERIAL REFUELING
OPERATION, ~~PLUS THE SURFACE TO AIR RECOVERY SYSTEM.~~

Slide 24 THE ONLY REMAINING ARES AIRCRAFT THAT I HAVE NOT MENTIONED
HU-16 ✓ ARE: THE HU-16, THE OLD WORKHORSE OF RESCUE SINCE 1949 AND
00067 WAS
A VETERAN OF TWO WARS, ~~WHICH~~ GRACEFULLY RETIRED FROM
SEPTEMBER OF THIS YEAR,
THE ARES INVENTORY IN ~~1970 (END OF YEAR)~~.

NEXT LOCAL BASE RESCUE
Slide 25 THE HH-43 ~~ARE~~ AIRCRAFT. THIS AIRCRAFT HAS PERFORMED
HH-43 ✓ ~~WELL~~
00068 EXCEPTIONALLY ~~IMPORTANT~~ ~~MISSIONS~~ IN EVERY
PHASE OF ~~GENERAL~~ SEARCH, RESCUE AND RECOVERY MISSIONS,
RUNNING THE GAMUT FROM DISASTER RELIEF, MERCY MISSIONS,
LOCAL BASE RESCUE FIRE SUPPRESSION, LOGISTICAL SUPPORT IN

DESOLATE, MOUNTAINOUS

SECRET

~~SECRET~~

DESOLATE, MOUNTAINOUS REGIONS OF THE WORLD AND MOST
RECENTLY COMBAT AIRCREW RECOVERY IN THE HOSTILE
ENVIRONMENT OF SEA. OF THE TOTAL 2460 SAVES COMPILED BY
AARS SINCE DEC 1964, 924 OF THESE WERE ACCOMPLISHED BY THE
HH-43 F/B HELICOPTERS, OF WHICH 614 WERE ACCREDITED AS
COMBAT SAVES IN SEA. SINCE 1961 THE FIRE SUPPRESSION KIT
WAS EMPLOYED 80 TIMES AND IS DIRECTLY RESPONSIBLE FOR 10
SAVES.

Slide 26
PJ
00078 ✓

AT THIS POINT IT IS APPROPRIATE TO INTRODUCE A VERY SPECIAL
MEMBER OF OUR RESCUE TEAM, THE FAMOUS "PARARESCUEMAN".
REGARDLESS OF THE BUILT-IN SOPHISTICATION OF ANY MACHINE ~~OVER-~~
~~HELY/PROGRAMMED/RESCUE~~, NO SYSTEM IS COMPLETELY
CAPABLE OF PERFORMING THE RECOVERY MISSION WITHOUT THE
PJ, ~~AND~~ THIS IS TRUE FOR ANY SYSTEM FROM THE SURFACE TO
AIR, ACR HELICOPTER, UP THROUGH AND BEYOND THE
DEVELOPMENT^{AND} OPERATIONAL LIFE SPAN OF FUTURE COMBAT
AIRCREW RECOVERY SYSTEMS. THE PARARESCUEMEN TRULY
COMPLETE OUR RECOVERY SYSTEM - THEY ARE TRAINED PROFESSIONALS
- SCUBA QUALIFIED - EXPERT MEDICAL TECHNICIANS - PRECISION
PARACHUTISTS, AND HIGHLY PROFICIENT IN SURVIVAL TECHNIQUES.
TO QUALIFY FOR THIS POSITION, EACH PARARESCUEMAN REQUIRES
ONE YEAR OF SPECIALIZED TRAINING. THEY ARE THE RIGHT ARM OF
RESCUE THAT OFFER A LATITUDE AND FLEXIBILITY OF OPERATIONS
WHICH EXCEEDS THE ~~CONVENTIONAL~~ LIMITATIONS OF MACHINES.

~~SECRET~~

REGARDLESS OF WEATHER 24

SECRET

REGARDLESS OF WEATHER OR ENVIRONMENTAL CONDITIONS, THE
PARARESCUE^EMAN WHEN COMMITTED TO A ~~RESCUE~~ MISSION,
~~RESCUE~~; GREATLY INCREASE THE CHANCES FOR A SUCCESSFUL
RECOVERY. WITHOUT THIS CAPABILITY COMBAT AIRCREW RECOVERY
IN SEASIA WOULD NOT BE FEASIBLE~~PRACITICAL~~ OR IN MOST CASES,
POSSIBLE.

NOW THAT I HAVE DISCUSSED WHAT WE HAVE TO WORK WITH, I WOULD
LIKE TO COVER WHERE AND HOW WE USE THE DIVERSE AND INTEGRATED
CAPABILITIES OF OUR ASSIGNED RESOURCES IN RESPONSE TO THE
VARIOUS GLOBAL MISSION REQUIREMENTS.

2146 27 OUR MOST PRESSING MISSION TODAY IS COMBAT AIRCREW RECOVERY
MAP SEA
00094 ✓ IN SEASIA. LET ME DIGRESS HERE FOR A MOMENT. AS I STATED IN
THE BEGINNING OF THIS BRIEFING, ~~DURING THE KOREAN CONFLICT~~
RESCUE WAS BUILT UP TO APPROXIMATELY 12,000 PERSONNEL, DURING TH
IMMEDIATELY FOLLOWING THIS PERIOD, RESCUE WAS REDUCED
KOREAN CONFLICT
~~DURING~~ TO THE ALL TIME LOW OF ~~ONLY~~ 1465 MEN AND 66 AIRCRAFT.
ALSO
~~WHEN~~ THE WARTIME MISSION CLAUSE WAS WITHDRAWN FROM OUR
MISSION STATEMENT BY HQ USAF, PREDICATED ON THE PHILOSOPHY
THAT WARTIME WAR IS MERELY AN EXTENSION OF PEACETIME
EQUIPMENT AND PROCEDURES. THIS, OF COURSE, IS EXACTLY ~~THE~~
OUT OF PHASE.
REVERSE OF THE ACTUAL SITUATION. THE PHILOSOPHY CREATED A
TECHNOLOGICAL VOID IN PERSONNEL RECOVERY SYSTEMS, ~~WHICH~~ DUE
TO LACK OF PRIORITY ^{AND} SUPPORT, ^{RESCUE RESOURCES} FAILED TO KEEP PACE WITH THE

BUILD-UP AND MODERNIZATION

SECRET

SECRET

BUILD-UP AND MODERNIZATION OF ^{THE} TACTICAL FORCES. THIS VOID WAS PAINFULLY BROUGHT TO LIGHT IN 1964 WHEN TACTICAL FORCES WERE COMMITTED TO THE VIETNAM CONFLICT. INCIDENTALLY, THIS WAS NOT THE FIRST TIME THAT RESCUE HAS BEEN PLACED IN THIS UNTENABLE POSITION. BUDGETARY LIMITATIONS HAS ^{CONTINUALLY} DICTATED AUSTERE EQUIPAGE OF RESCUE ~~UNIT~~ AS WAS EVIDENCED DURING THE INITIAL ~~68~~ BUILD UP IN KOREA IN 1950. WHAT RECOVERY FORCES WERE AVAILABLE WERE WIDELY DISPERSED AND OVER-COMMITTED TO NORMAL SAR REQUIREMENTS. HOWEVER, OUR NON-COMBAT EQUIPPED RESCUE AND RECOVERY FORCE WAS COMMITTED IN SEASIS TO SUPPORT TACTICAL OPERATIONS AND THE LONG HAUL WAS STARTED TO BUILD UP THE COMBAT RECOVERY CAPABILITY AS DEPICTED ON THIS ^{NEXT} SLIDE.

Slide 28 Force Build-up 00095 DURING THE INITIAL PHASES OF RESCUE BUILD-UP IN SEASIA (1964 - 1966), WE DEPLOYED OVER 1000 PERSONNEL (AIRCRAFT AND SUPPORT PERSONNEL), ON A TDY BASIS, PRIOR TO THE ESTABLISHMENT OF THE PCS DEPLOYMENT. TO DO THIS, STATESIDE LBR DETACHMENTS WERE INACTIVATED AND DEPLOYED TO SEA. BY 1966 ARRS HAD A FULL PCS FORCE IN SEA. TODAY ARRS HAS THE FOLLOWING FORCES IN SEA.

32 HH-43D/F ASSIGNED TO 14 DETS OF 38 ARRSQ THROUGHOUT RVN AND THAILAND.

11 HC-130P - ASSIGNED TO 39 ARRSQ, TUY HOA AB, RVN, WHICH PROVIDE CROWN COVERAGE

SECRET

SECRET

PROVIDE CROWN COVERAGE (~~IN-FLIGHT~~) FOR STRIKE AIRCRAFT,
AIRBORNE SAR MISSION COORDINATOR, COMMUNICATIONS RELAY
BETWEEN THE JSARRC AND ACR FORCE, AND IN-FLIGHT REFUELING
FOR HH-3E/HH-53 ACR AIRCRAFT,

22 HH-3E - 14 ASSIGNED TO 37 ARRSQ, DANANG AB, RVN
8 ASSIGNED TO DET 1, 40 ARRSQ, NAKHON PHANOM AB,
THAILAND

6 HH-53 - ASSIGNED TO 40 ARRSQ UDORN AB, THAILAND

SLIDE 29
DECORATIONS
00087

UNDER THE CONTROL OF THE
THESE FORCES ~~COMMANDED BY COL LECKE, CDR, 3 ARRG~~ AT TAN

SON NHUT AB. ~~THEY~~ HAVE REVOLUTIONIZED COMBAT AIRCREW
THEY
RECOVERY, AND ~~AMONG THEM~~ HAVE EARNED ~~THE~~ DECORATIONS

SLIDE 30
DECORATIONS
00087

SINCE THE BEGINNING OF THEIR COMMITMENT IN 1964 WHICH IS
MORE DECORATIONS THAN ANY OTHER ~~US~~ ORGANIZATION IN THE HISTORY
OF OUR US AIR FORCE.

~~READ PROCEEDING~~

SECRET

SECRET

Slide 29A THE HH43'S ASSK THROUGHOUT VIETNAM AND THAILAND,
HH43 SEA

Posture 0096- ALTHOUGH EXTREMELY LIMITED IN RANGE, HAVE PROVEN TO BE A

WORKHORSE. ORIGINALLY 12 OF THESE AIRCRAFT WERE COMBAT
CONFIGURED WITH DASH 11 ENGINES, ARMOR PROTECTION AND THE
NEW RESCUE HOIST - AND DESIGNATED COMBAT AIRCREW RECOVERY
VEHICLES. HOWEVER, TRUE TO THE MOTTO OF ARS "THAT OTHERS

^{THE}
~~MAY LIVE~~ THE TOTAL HH43 FORCE ~~IN SEAS~~ HAS SHARED IN
PERFORMING SOME OF THE MOST DRAMATIC, PERILOUS COMBAT
RECOVERY MISSIONS RECORDED IN THE ANNALS OF THE US AIR FORCE.

DAILY, HQ ARRS RECEIVES COMBAT MISSION REPORTS EXTOLLING THE
EXPLOITS OF THE HH43 CREWS OPERATING ^{UNDER ADVERSE CONDITIONS} ~~IN THE HAZARDOUS HOSTILE~~

~~ENVIRONMENT~~ TO ACCOMPLISH THE MISSIONS IN THE REPUBLIC OF
VIETNAM AND THAILAND. THE MISSIONS VARY FROM THE STANDARD
LBR ^{STAIR} ~~ALERT~~ ALERT MISSION, TO RESCUING AIRCREW AND GROUND
FORCES FROM LOCAL COMBAT AREAS. ~~OFTEN WHILE UNDER HEAVY~~

~~THE HEAVY GROUND FIRE~~ MEDICAL EVACUATION OF WOUNDED ~~AND~~
^{IS FREQUENTLY ACCOMPLISHED WHILE UNDER HEAVY FIRE FROM}
PERSONNEL ~~TO THE HEAVY GROUND FIRE~~ ^{THE VIE} ~~COM~~

EARNED AIRMAN PITSENBARGER THE SECOND HIGHEST AIR FORCE
^{HE WAS AWARDED}
AWARD FOR BRAVERY, THE AIR FORCE CROSS POSTHUMOUSLY. AMN
PITSENBARGER, A 26-YR OLD PJ ASSIGNED TO THE HH-43BET 6, 38

~~ARRIVED AT THE AREA~~ WENT TO THE AID OF A BATTERED ARMY UNIT,
SURROUNDED BY VENT CONG. HE HELPED EVACUATE WOUNDED
SOLDIERS UNTIL THE HH43 WAS FORCED TO LEAVE THE AREA DUE TO
SEVERE GROUND FIRE, AMN PITSENBARGER REMAINED WITH THE

SURROUNDED ARMY UNIT

SECRET

SECRET

SURROUNDED ARMY UNIT TO TREAT THE UNEVACUATED WOUNDED. THROUGHOUT THE NIGHT AMN PITSENBARGER APPLIED HIS SKILLS TO SAVING LIVES AND PASSING AMMUNITION AND WEAPONS FROM THE WOUNDED TROOPS TO THE DEFENDERS. THE NEXT DAY, WHEN THE HH43 RETURNED TO THE SITE, AMN PITSENBARGER HAD PAID THE ULTIMATE PRICE IN THE EFFORT TO SAVE OTHERS.

Slide 30
Past
Concept
of OPS
00097 ✓

THE LONG RANGE, OUT OF COUNTRY ACR CAPABILITY, PRIOR TO THE INTRODUCTION OF THE HC130P HELICOPTER TEAM ~~WUFOUA~~ WAS PROVIDED BY HU-16'S, ~~AND~~ HC-54'S ~~CROWN CORNETS~~ AND CH3C HELICOPTERS. THE HU-16 DID PROVIDE A LIMITED, BUT VALUABLE, ACR CAPABILITY IN THE GULF OF TONKIN AND HAS BEEN ^{CREDITED} ~~ACCREDITED~~ WITH 47 COMBAT SAVES. HOWEVER, THE NORTHERN SECTIONS OF THE NORTH VIETNAM LAND MASS WERE PRACTICALLY INACCESSIBLE TO THE CH3C, THEREBY ALMOST NEGATING ANY POSSIBILITY OF RECOVERING ANY AIRCREW DOWNED NORTH OF THE HANOI-HAIPONG ~~LANDMASS~~ AREA. EVEN WITH THE INTRODUCTION OF THE HC-130H IN THE AREA IN 1966, THE ACR CAPABILITY DID NOT INCREASE DUE TO THE LIMITED APPLICATION OF THE SURFACE TO AIR RECOVERY SYSTEM. THE ONLY PRACTICAL BENEFIT DERIVED FROM THE FIXED WING FORCE, ~~ASIDE FROM~~ THE GULF OF TONKIN ACR CAPABILITY, WAS IMPROVED AIRBORNE MISSION COORDINATION.

HOWEVER, TODAY WITH

SECRET

SECRET

Slide 3) HOWEVER, TODAY WITH THE ADVENT OF THE "TEAM CONCEPT" ARRS
Current
Concept
0084 - FORCES IN SEA HAVE DEVELOPED A ~~RECENTLY~~ FLEXIBLE ACR
CAPABILITY WHICH PERMITS ~~OPERATION CAPABLE~~ ^{MOST} RESPONDING EFFECTIVELY TO ANY RECOVERY
REQUIREMENT IN THE THEATER.

SLIDE 31 ON THIS CHART WE HAVE PORTRAYED THE DAILY ~~RECENTLY~~ MISSION
CURRENT
CONCEPT
00084 PROFILES. THE GULF OF TONKIN COVERAGE IS PROVIDED DAILY
BY ~~RECENTLY~~ HH-3E'S FROM DANANG ^{THE 37TH AT} ~~RECENTLY~~. TO PROVIDE ADEQUATE
COVERAGE, TWO HH3E'S ASSUME DAWN TO DUSK STRIP ALERT AT
QUANG TRI, ~~RECENTLY~~ ONE HH3E IS ON STRIP ALERT AT DANANG, AND
SINGLE HH3E'S ARE FRAGGED TO PERFORM TWO ORBITS PER DAY
BETWEEN THE HRS OF 2400Z AND 0800Z. THE INLAND ACR HELICOPTER
COVERAGE IS PROVIDED BY HH53'S AND HH3'S. THESE HELICOPTERS
UNTIL RECENTLY HAVE BEEN SCHEDULED IN PAIRS TO OPERATE FROM
FORWARD OPERATING LOCATIONS ^{OR} LIMA SITES - IN LAOS, ~~TO~~ ^{THEY}
^{PROVIDED} STRIP ALERT ^{OR} ORBIT IN SUPPORT OF STRIKE AIRCRAFT.
~~THE~~ ^{HELICOPTERS} ORBITS ARE ESTABLISHED TO PROVIDE ~~RECENTLY~~ ON STATION
DAILY DURING PERIODS OF HIGH DENSITY STRIKES. HOWEVER, MOST
LIMA SITES IN LAOS HAVE ~~RECENTLY~~ ^{BEEN} OVERRUN BY ~~RECENTLY~~
~~RECENTLY~~ ~~RECENTLY~~, THEREBY DENYING THE RESCUE
HELICOPTERS USE OF THESE SITES EXCEPT FOR ACTUAL EMERGENCY
CONDITIONS, AND THEN ONLY DURING DAYLIGHT HOURS. THE HC130'S
ARE FRAGGED DAILY FOR DAWN TO DUSK ORBITS IN LAOS AND
MORNING AND AFTERNOON ORBITS ^{IN} ON THE GULF OF TONKIN. THE

PRIMARY FUNCTIONS OF

SECRET

SECRET

PRIMARY FUNCTIONS OF THE HH-130 ARE TO PROVIDE AIRBORNE
MISSION COORDINATION^{AND} CONTROL AND REFUELING FOR THE ~~AAH~~
HELICOPTERS.

Slide 32
Concept
of Ops
Route
Profile
00098 ✓

TYPICAL DAILY PROFILES FOR BOTH THE INLAND AND OVER-WATER ACR
HELICOPTER ORBITS ARE DEPICTED ON THIS CHART. FIRST LET'S
DISCUSS THE GULF OF TONKIN ~~AAH~~ COVERAGE.

THE HH-130 PERFORMING ORBIT IN THE GULF OF TONKIN AREA IS
USUALLY ESCORTED BY USN ~~AAH~~ AIRCRAFT AND IS REFUELED BY
EITHER ^{130's} ~~HH-130~~ AT PREDESIGNATED TIMES^{OR} LOCATIONS OR ^{BY} USN VESSELS
ON STATION IN THE GULF. ^{THIS PROVIDES} ~~THEREBY OBTAINING~~ EXTENDED RANGE^{AND} TIME
ON STATION AND EXCELLENT OFF-SHORE ACR CAPABILITY. CONSIDERING
THAT ONLY ONE HH-130 ^{IS ON ORBIT} ~~IS ON ORBIT~~ AT A TIME IN THE GULF, REQUIREMENTS
TO PENETRATE THE NVN COAST LINE ~~THESE REQUIREMENTS~~
~~REQUIRE~~ ^{THE TASK IS} ESTABLISHMENT OF AN ACR TASK FORCE, ~~WHICH~~
CONTAINS AT LEAST TWO HH-130'S OR ONE HH-130 AND ^{AS WELL AS} USN ~~RESCUE~~
HELICOPTER^{AS WELL AS} RESCORT AND RESCAP AIRCRAFT. IN MANY INSTANCES,
THE SOPHISTICATED COASTAL DEFENSES OF NVN ~~CONSISTING OF~~
~~ANTI-AIRCRAFT AND SAM BATTERIES~~ ^{PRECLUDE} ~~TO SAM BATTERIES~~ ANY ACR TASK FORCE FROM
PENETRATING THE AREA.

PRIOR TO THE LOSS OF LMA SITES IN LAOS, THE INLAND, OUT OF
COUNTRY ACR MISSIONS

SECRET SECRET

SECRET

WORLDWIDE SYSTEM

COUNTRY ACR MISSIONS WERE CONDUCTED BY HH3E'S AND HH53'S.
STAGED THE WERE
THEY SCRAMBLED FROM LIMA SITES ~~REARRANGED~~ AND REFUELED BY
130 IN ORBIT
CROWN AIRCRAFT ~~AS REQUIRED~~ TO INSURE MAXIMUM
TIME ON STATION AND EXTENDED RANGE FOR RESPONSE TO DEEP
AND
PENETRATION, LONG ENDURANCE MISSIONS.

DAILY ONE HH53 AND ONE HH3E WERE LAUNCHED FROM THEIR LIMA
SITES TO ESTABLISH ORBIT IMMEDIATELY ADJACENT TO NVN TO BE
ON STATION AT TIME ^{OVER} ON TARGET FOR THE STRIKE AIRCRAFT. THIS
PROVIDED STRIKE FORCE COVERAGE FROM 15 MINUTES BEFORE TARGET
~~WAS TO BE STRUCK UNTIL THE ON TARGET TIME 30 MIN. AFTER WHICH~~
TIME TO 30 MINUTES AFTER, AT WHICH TIME THE HELICOPTERS
~~RECOVERED AT THE LIMA SITES.~~ THE OTHER HH53
RECOVERED AT THE LIMA SITES.
AND HH3E AT THE LIMA SITES MAINTAINED A STRIP ALERT POSTURE.

IN THE EVENT A MISSION BROKE DURING THE ORBIT PERIOD, THE
STRIP ALERT HELICOPTER WAS SCRAMBLED TO THE VICINITY AND
USED AS HIGH BIRD. IF THE MISSION BROKE WHILE BOTH THE
HELICOPTERS WERE ON STRIP ALERT, BOTH WERE SCRAMBLED -
ONE AS HIGH BIRD, THE OTHER AS LOW BIRD.

NOW THAT THE LIMA SITES HAVE BEEN DENIED TO RESCUE FORCES
EXCEPT FOR EMERGENCY REQUIREMENTS, THE TASK OF PROVIDING
ACR COVERAGE FOR TACTICAL FORCES IN LAOS AND NVN HAS BEEN
COMPOUNDED, ^{HOWEVER} NOT BEYOND ^{OUR CURRENT} THE CAPABILITY OF RESCUE-CONCEPT
~~FORCES - SINCE THE~~ DUE TO THE IN-FLIGHT REFUELING TEAM
CONCEPT. ONE YEAR AGO - PRIOR TO THE INTRODUCTION OF INFLIGHT

REFUELING - DEEP
PENETRATION
SECRET

~~SECRET~~

~~REFUELABLE HELICOPTERS IN CHINA - DEEP PENETRATION OF NVN~~
~~TO EFFECT RECOVERY OF DOWNED CREWMEN~~ WAS PRACTICALLY
IMPOSSIBLE WITHOUT USING EN ROUTE SITES FOR LANDING AND
REFUELING. ~~AND~~ ^{AND} ~~THUS THE REQUIREMENT FOR LIMA SITES WAS~~
~~ESTABLISHED. ONCE THE INFLIGHT REFUELING BECAME~~
~~OPERATIONAL~~ ^{IN JULY OF 1967} THE LIMA SITES WERE STILL
UTILIZED AS STAGING BASES, ^{THIS} ~~WHICH~~ ^{THE} REDUCED THE TOTAL DAILY FLYING
TIME REQUIRED TO SUPPORT THE MORNING AND AFTERNOON ORBIT
REQUIREMENTS. NOW THAT THE LIMA SITES ARE NOT AVAILABLE
CHINA RESCUE FORCES STILL HAVE THE CAPABILITY ~~WHICH CAN~~
~~TO~~ ^{TO} SATISFY ORBIT REQUIREMENTS IN LAOS, ~~AND THAT IS~~ ^{BY}
^{PROVIDING} ~~TO RESCUE~~ ORBIT AIRCRAFT DIRECT FROM HOME STATION TO
ORBIT POSITIONS. THE EXTENDED RANGE PROVIDED BY ~~INFLIGHT~~
INFLIGHT REFUELING STILL ALLOWS THE HIGH DEGREE OF FLEXIBILITY
TO RESPOND TO DEEP PENETRATION MISSIONS INTO THE HEART LAND
OF NVN ~~TO EFFECT RECOVERY OF DOWNED CREWMEN~~ AND
RETURN TO HOME STATION WITHOUT INTERMEDIATE STOPS FOR
REFUELING.

ANY REQUIREMENT TO PENETRATE A HOSTILE ENVIRONMENT REQUIRES
SANDY (A-1E) RESCORT AND JET RESCAP, FOR THE VULNERABLE
HELICOPTER TO STAND ANY CHANCE OF SURVIVAL AND MISSION
ACCOMPLISHMENT. BECAUSE OF THE VULNERABILITY OF THE HH3E/
HH53 HELICOPTERS, THEY ARE ALWAYS COMMITTED IN PAIRS TO AN

ACR MISSION IN

~~SECRET~~

SECRET

ACR MISSION IN HOSTILE ENVIRONMENTS. THE HIGH BIRD PROVIDES BACKUP CAPABILITY TO COMPLETE THE MISSION IF THE LOW BIRD RECEIVES DAMAGE NECESSITATING RETURN TO HOME BASE OR TO RECOVER THE AIRCREW IF BATTLE DAMAGE DOWNS THE AIRCRAFT. THE SANDY RESCORT PROVIDES PROTECTION AGAINST INTERDICTION BY HOSTILE GROUND FORCES BOTH ENROUTE AND SPECIFICALLY DURING THE RECOVERY OPERATIONS WHEN THE ~~RECOVERY~~ HELICOPTERS ARE SITTING DUCKS FOR ANY POT SHOT FROM NVN GROUND FORCES.

JET RESCAP INSURES PROTECTION OF THE ACR TASK FORCE FROM INTERFERENCE BY NVN MIGS ENROUTE TO AND DURING RECOVERY OPERATIONS. ~~AND~~ ACCORDING TO SOME MISSION REPORTS, THE MIG THREAT IN ACR MISSIONS IS MORE THAN A POSSIBILITY. ON NUMEROUS OCCASIONS MIGS HAVE BEEN LAUNCHED AGAINST THE ACR TASK FORCE ^{BUT} ~~AND~~ FORTUNATELY, TO DATE, WE HAVE NOT SUFFERED ANY LOSSES FROM MIG ACTIONS. HOWEVER, NUMEROUS ARRS AIRCRAFT AND HELICOPTERS HAVE BEEN LOST TO HOSTILE GROUND FIRE AND OTHER ACTIONS AS SHOWN ON THIS CHART:

Slide 33
Losses
00084 ✓

7
4 HH43'S;

9
4 HH3E'S AND 4 HU16'S AND 2 HC-130'S

31
RESULTING IN A TOTAL LOSS OF 31 ARRS MEN. OUTSTANDING

EXAMPLES OF THE DEDICATION OF ARRS PERSONNEL TO THE COMBAT RECOVERY MISSION CAN BE READILY SEEN DAILY IN THE MISSION

NARRATIVE REPORTS SUBMITTED

SECRET

~~SECRET~~

NARRATIVE REPORTS SUBMITTED BY JARRGP AND 7AF, ~~REVEALING~~
~~THE HEROIC DEEDS OF THE JARRGP~~. MOST MISSION REPORTS
READ LIKE A JOHN WAYNE MOVIE -- BLOOD, GUTS AND DAMN THE
TORPEDOES TYPE OF SCENARIO. BUT IN ALL CASES RAW COURAGE
IN THE FACE OF IMPOSSIBLE ODDS IS IN EVIDENCE. ~~RECOVERY~~ ON
JAN 14TH ~~1968~~ ^{OF THIS YEAR} ARRS JOLLY GREEN ~~RECOVERY~~ HELICOPTERS
INITIATED A SUSTAINED 8-DAY SEARCH AND RECOVERY OPERATION
IN N. VIETNAM, ^{THE ENTIRE OPERATION WAS CONDUCTED} UNDER EXTREMELY HAZARDOUS AND HOSTILE
CONDITIONS. THE INITIAL OBJECTIVE WAS 7 AIRCREWMEN, ~~PERSONNEL~~
FROM AN RB66, DOWNED IN THE MOUNTAINOUS NORTHWESTERN
PANHANDLE AREA OF NVN, PRACTICALLY ON THE LAOTIAN BORDER.
THE WEATHER WAS STRICTLY WINTER MONSOON IFR, LOW UNDERCAST,
BROKEN OVERCAST WITH SCATTERED TO BROKEN, MOUNTAIN TOPS
INTERSPERSED THROUGHOUT THE CLOUDS, AND SEVERE HOSTILE
GROUND FIRE IN ALL QUADRANTS. IT ALL STARTED WHEN ARRS
HC130'S CROWN 2 AND CROWN 5 REPORTED TWO BEEPERS. F4B'S
AND SANDY AIRCRAFT WERE DIVERTED TO THE SCENE TO SEARCH THE
AREA TO CONFIRM THE REPORTED BEEPERS. THE SANDIES AND F4'S
RAPIDLY ESTABLISHED VOICE CONTACT WITH THE DOWNED RB66 PERSON-
NEL THEREBY SUBSTANTIATING THE REPORT OF A DOWNED AIRCRAFT.
SANDIES REMAINED IN THE AREA UNTIL BINGO FUEL TO PINPOINT THE
SURVIVORS LOCATION BELOW THE OVERCAST. NUMEROUS BEEPERS
WERE HEARD AND VOICE CONTACT ESTABLISHED WITH 4 PERSONNEL.

HOWEVER, WEATHER AND

~~SECRET~~

SECRET

WORKING DRAFT

HOWEVER, WEATHER AND DARKNESS PREVENTED THE LAUNCH OF
THE JOLLY GREEN FORCE ~~FOR SEARCH AND RECOVERY OPERATIONS.~~
^{UNTIL} ~~AT~~ FIRST LIGHT THE NEXT DAY, THE JOLLY GREENS, ^{CONSISTING OF} TWO HH3E'S
AND TWO HH33'S, AND FOUR SANDIES, FULLY COEKED, WERE
LAUNCHED UNDER MARGINAL WEATHER CONDITIONS, ~~TO ONE TERRIBLE~~
~~CONSEQUENCE.~~ IMMEDIATELY VOICE CONTACT WAS RE-ESTABLISHED
WITH 3 SURVIVORS AND THEIR CONDITION WAS REPORTED AS GOOD.
ONCE IN THE OBJECTIVE AREA, THE LOW CEILINGS, 500 - 1500'
UNDERCAST WITH TOPS TO 11,000' - MOUNTAINOUS TERRAIN TOPPING
OUT AT 8000 PLUS ~~FEET~~ - AND HOSTILE ENEMY GUN FIRE PREVENTED
THE JOLLY GREENS FROM MAKING THE RECOVERY, HOWEVER, JOLLY
GREEN 20, AN HH3E, PROCEEDED NORTH OF THE AREA AND
APPARENTLY FOUND A SMALL OPENING IN THE UNDERCAST AND
ATTEMPTED TO LET DOWN TO VISUAL CONDITIONS. THE NEXT REPORT
FROM JG 20 WAS THAT HE CRASHED AT 3500' AND WAS IN THE CLOUDS.
JOLLY GREEN 15, ALSO AN HH3 LOW BIRD AND JG 72 HH53 HIGH BIRD
RUSHED TO THE AREA TO ASSIST. HOWEVER, ENEMY GROUND FIRE
INTENSIFIED AND JG 15 RECEIVED HITS BEHIND THE COCKPIT KNOCKING
OUT THE VHF RADIO. DUE TO CONTINUING WEATHER CONDITIONS AND
DARKNESS, JAF CMCER RECALLED THE SAR FORCE. THE SITUATION AT
THIS TIME WAS EXTREMELY PESSIMISTIC ^{IN SO FAR AS ANY IMPROVEMENT IN} ~~ABOUT IMPROVED~~ WEATHER.

~~RECOVERED REMAINS,~~

NOW THERE WERE

SECRET

SECRET

~~REDACTED~~ NOW THERE WERE 12 PERSONNEL
DOWNED IN ENEMY TERRITORY, 7 RB 66 CREWMEMBERS AND 5 JOLLY
GREENS. LATER REPORTS CONFIRMED, THAT DURING DESCENT JG
20 EXPERIENCED A POWER LOSS SUSPECTED TO BE CAUSED BY HOSTILE
GROUND FIRE HITTING AN ENGINE. ON THE THIRD DAY WEATHER
CLEARED SUFFICIENTLY TO ATTEMPT RECOVERY. JOLLY GREEN
69 ~~WAS~~ PICKED UP 3 PERSONNEL FROM THE RB66 AND JOLLY GREEN
71 ~~(WAS)~~ PICKED UP ALL FIVE CREWMEN FROM THE DOWNED HH3.
DURING WITHDRAWAL JG 71 PICKED UP GROUND FIRE AND LOST #1
ENGINE. WEATHER AGAIN BECAME A PROBLEM AND ALL SAR FORCES
WERE AGAIN RECALLED TO HOME BASE. HOWEVER, JG71 HAD TO
RECOVER WITH THE HH3 CREW AT A LIMA SITE DUE TO DAMAGE
RECEIVED DURING THE MISSION. THE SEARCH FOR THE REMAINING
FOUR RB66 PERSONNEL CONTINUED THROUGH THE 8TH DAY. WEATHER
AGAIN BEING THE LIMITING FACTOR. THESE 4 DAYS OF SEARCH DID
NOT TURN UP ANY ELECTRONIC OR VISUAL INDICATION OF SURVIVORS
AND AT THE END OF THE 8TH DAY THE MISSION WAS SUSPENDED
PENDING NEW DEVELOPMENTS. THE BOX SCORE WAS ONE HH3E LOST,
ONE HH3E DAMAGED, ONE HH33 DAMAGED AND 8 PERSONNEL RECOVERED.
AT THIS POINT I WOULD LIKE TO SHOW YOU A MOVIE ^{ENTITLED "NO MAN}
~~EXPENDABLE~~ ^{ENTITLED "NO MAN}
~~EXPENDABLE~~ ^{ENTITLED "NO MAN} WHICH WILL TAKE YOU ON TWO ACTUAL RECOVERY
~~MISSIONS~~ ^{ENTITLED "NO MAN} ENTITLED "NO MAN
ENTITLED "NO MAN ENTITLED "NO MAN
ENTITLED "NO MAN ENTITLED "NO MAN

SECRET
MOVIE "NO MAN EXPENDABLE"

FILM

AS YOU CAN SEE

SECRET

VIC 1000

COMMUNICATIONS CHANNELS ESSENTIAL TO THE EXECUTION OF A
SUSPENDED COMBAT AIRCREW RECOVERY MISSION.
~~THE JOLLY GREENS~~ "KEEPER" "RECOVERY" "RECOVERY"

Slide 35
Shield
00066 ✓

AS YOU CAN READILY DETERMINE FROM THE JOLLY GREEN 20
MISSION I BRIEFED ON BEFORE THE MOVIE, ARRS HELICOPTERS ~~WAS~~ /
~~THESE AIRCRAFT~~ ARE EXTREMELY LIMITED IN ^{THEIR} NIGHT AND
WEATHER ~~OPERATIONAL~~ CAPABILITY, WHICH DECREASES THE OVERALL
EFFECTIVENESS OF THE ACR FORCE, ~~HOWEVER~~ ^{THIS} LIMITS 7 AF
ABILITY TO LAUNCH NIGHT STRIKES AGAINST CRITICAL NVN TARGETS.
ON NUMEROUS OCCASIONS THE JOLLY GREENS ~~WAS~~ SUSPENDED
OPERATIONS IN HOSTILE ENVIRONMENTS BECAUSE OF WEATHER
AND/OR DARKNESS EVEN THOUGH THEY HAD A LOUD AND CLEAR
"KEEPER" ~~RECOVERY~~ AND WERE IN VOICE CONTACT WITH THE
DOWNED CREWMEN. ^{IN SOME CASES RECYCLING} ~~THE~~ THE MISSION ON SUBSEQUENT DAYS,
~~RECOVERY~~, FAILED TO RELOCATE THE DOWNED AIRMEN. TO
CIRCUMVENT THIS SHORTCOMING IN ~~ARRS~~ ACR CAPABILITY, AIR FORCE
HAS INITIATED A CRASH PROGRAM IN RESPONSE TO 7AF REQUIREMENT
FOR DEVELOPMENT OF A FULL NIGHT RECOVERY CAPABILITY, ~~THE~~
~~RECOVERY~~. THE SYSTEM TO SATISFY THE 7AF REQUIREMENT
MUST HAVE THE CAPABILITY TO:

- 1. ALLOW COVERT AND OVERT PENETRATION OF THE OBJECTIVE AREA
AND
2. UNDER NIGHT/IX CONDITIONS -

PROVIDE SEARCH AND

SECRET

SECRET

PROVIDE SEARCH AND LOCATION OF THE DOWNED CREWMEMBER
USING BOTH COVERT AND OVERT DETECTION EQUIPMENT -

PROVIDE AUTOMATIC APPROACH AND HOVER TO EFFECT RECOVERY
IFR
IN ~~SEA~~ CONDITIONS -

PROVIDE PICKUP OF SURVIVOR AND EXIT OF THE OBJECTIVE AREA
^{AND}
UNDER NIGHT / ~~IFR~~ IFR CONDITIONS.

THE SYSTEM ENVISIONED TO SATISFY THIS REQUIREMENT IS A
MODIFICATION TO AND IMPROVEMENT UPON THE NAVY ^(THAS) ~~SYSTEM~~
INTEGRATED HELICOPTER AVIONIC SYSTEM. ^{THIS SYSTEM} ~~WAS~~ HAS UNDERGONE
EXTENSIVE TESTING, AND APPEARS TO SATISFY THE ARRS REQUIREMENT
WITH LITTLE MODIFICATION, ~~-----~~.

Slide 37 THIS ~~SYSTEM~~ DEVELOPMENT IS REFERRED TO AS SEAOR 114.
SEAOR 114
00103 (SOUTHEAST ASIA OPERATIONAL REQUIREMENT NUMBER 114). SEAOR
ACTIONS PROVIDE SHORT TERM DEVELOPMENT OF SYSTEMS ^{AND} ~~CAPABILITIES~~
TO SATISFY AN IMMEDIATE OPERATIONAL REQUIREMENT FOR US FORCES
IN SEA. THE EQUIPAGE FOR SEAOR 114 WILL INCLUDE:

TERRAIN AVOIDANCE/FOLLOWING RADAR

AUTOMATIC FLIGHT CONTROL SYSTEM

DOPPLER NAVIGATION SYSTEM

NIGHT VIEW SYSTEMS

TERMINAL POINT IDENTIFICATION SENSOR (TPIS) OR TARGET
IDENTIFICATION PRESENTATION SYSTEM (TIPS).

SECRET

THE VERTICAL SITUATION

SECRET

THE VERTICAL SITUATION DISPLAY OR VSD CAN BE QUALIFIED AS THE KEY TO THE NIGHT RECOVERY SYSTEM. IT IS A CATHODE RAY TUBE, ONE FOR THE PILOT AND ONE FOR THE CO-PILOT WHICH PROVIDES PERFORMANCE DATA.

Slide 38
Contact
Analog
00104 ✓

TERRAIN PROFILES AND TV INTERROGATION OF THE NIGHT VIEW SYSTEM.

AS I DESCRIBE THE VARIOUS PIECES OF EQUIPMENT INCORPORATED IN SEAOR 114 I WILL SHOW THE VARIED CAPABILITIES OF THIS UNIT.

FIRST THE CONTACT ANALOG DISPLAY WHICH PROVIDES PERFORMANCE AND FLIGHT CHARACTERISTIC DATA SUCH AS AIRSPEED, HEADING, PITCH AND ROLL, ALTITUDE, STEERING VECTOR, HEADING REFERENCE, ETC. ALL NEATLY TIED INTO ONE DISPLAY FOR READY REFERENCE.

PORTIONS OF THIS DISPLAY SUCH AS THE HORIZON LINE, COMMAND STEERING VECTOR AND AIRCRAFT VELOCITY VECTOR ARE ALSO SUPER-IMPOSED ON THE TERRAIN FOLLOWING/AVOIDANCE DISPLAY TO PROVIDE STEERING, AIRSPEED AND HORIZON REFERENCES.

Slide 39
40

TERRAIN FEATURES ON THE TERRAIN AVOIDANCE/TERRAIN FOLLOWING

Shades of
Grey/E-SCAN

SYSTEM ARE PRESENTED EITHER IN SHADES OF GREY OR E-SCAN

00105 ✓
00106 ✓

PRESENTATION AS SHOWN ON THIS VIEWGRAPH. EACH PROVIDE THE

VERTICAL TERRAIN PROFILE. THE SHADES OF GREY SHOW 5 TERRAIN

Slide 41
TV/TA
00107 ✓

PROFILES FOR VARIOUS RANGES. IT'S POSSIBLE TO OPERATE THE

TV/TA IN 4 DIFFERENT MODES.

AUTOMATIC TERRAIN FOLLOWING:

SECRET

SECRET

AUTOMATIC TERRAIN FOLLOWING: IN THE AUTOMATIC MODE THE INTEGRATED SYSTEM AUTOMATICALLY MAINTAINS THE AIRCRAFT WITHIN PRE-SET LIMITS ABOVE THE COMMAND HEIGHT SET BY THE PILOT, WHICH MAY BE BETWEEN 100' AND 1000'. TO ALLOW THE PILOT TO MONITOR SYSTEM OPERATION, THE COMPUTER COMMAND SIGNALS ARE PRESENTED ON THE ~~VSD~~ ^{VERTICAL SITUATION DISPLAY, OR THE HORIZONTAL DISPLAY} ~~COMMAND~~. THE ~~VSD~~ ^{HORIZONTAL DISPLAY} PRESENTS EITHER COMPLETE RADAR MAP INFORMATION, OR IT CAN, AT THE PILOT'S OPTION, PRESENT ONLY THAT GROUND WHICH EXTENDS ABOVE THE HORIZONTAL FLIGHT VECTOR. THE LATTER CAN BE USED FOR TERRAIN AVOIDANCE PURPOSES. EITHER A CONSTANT ALTITUDE MODE OR CONSTANT SPEED MODE CAN BE SELECTED FOR TERRAIN FOLLOWING.

MANUAL TERRAIN FOLLOWING: IN THIS MODE THE FLIGHT COMMANDS WILL BE PRESENTED ON THE ~~VSD~~ ^{VERTICAL SITUATION DISPLAY} FOR EXECUTION BY THE PILOT. ~~CLERK~~ COMMANDS ARE DISPLAYED BEFORE THEY WOULD BE IN THE AUTOMATIC MODE TO ALLOW FOR PILOT RESPONSE TIME.

MANUAL TERRAIN AVOIDANCE: THIS CAN BE CARRIED OUT BY THE SELECTION OF A "SHADES OF GREY" PRESENTATION ON THE ~~VSD~~ ^{VERTICAL SITUATION DISPLAY}. THE DISPLAY PROVIDES 5 CONTOURS REPRESENTING THE PEAK ELEVATION ANGLE FOR 5 DISCRETE RANGE INTERVALS COVERING A 140° FORWARD ASPECT SECTOR.

GROUND MAPPING: THE RADAR CAN ALSO BE USED FOR GROUND MAPPING OVER EITHER A PLUS OR MINUS 45° FORWARD SECTOR OR THE FULL

140°, RANGES OF

SECRET

SECRET

360°. RANGES OF 5, 10, 20 OR 30 MI CAN BE SELECTED. THIS SINGLE DISPLAY IS ON THE LOWER MAIN CONSOLE, HORIZONTAL RADAR DISPLAY UNIT. SINCE EACH PILOT HAS IDENTICAL DISPLAYS, EXCEPT FOR GROUND MAPPING, THEY CAN BOTH USE THE SAME MODE OR VARIOUS COMBINATIONS WHICH IN EFFECT MEANS THAT 3 DIFFERENT SITUATIONS CAN BE MONITORED SIMULTANEOUSLY. THE AUTOMATIC FLIGHT CONTROL SYSTEM (AFCS) CONSISTS OF A HOVER COUPLER USED IN CONJUNCTION WITH THE CURRENT HH53B FLIGHT CONTROL SYSTEM. COMMANDS FOR AUTOMATIC VERTICAL AND HORIZONTAL STEERING CONTROL ORIGINATE AT THE CONTROL COMPUTER AND ARE IMPLEMENTED THROUGH THE STICK ^{BY} ~~FROM~~ CIRCUITS.

41A8
Slide
Blank
CC177 ✓

THE COMBINED COMPUTER ^{AND} ~~AND~~ ^{AUTOMATIC FLIGHT CONTROL} SYSTEMS PROVIDE COMPLETE AUTOMATIC FLIGHT WITH EN ROUTE NAVIGATION, TERRAIN FOLLOWING, APPROACH TO THE OBJECTIVE AREA, CONTROLLED DESCENT AND APPROACH TO HOVER AND HOVER AT PRESELECTED LOCATION AND ALTITUDE. ADDITIONALLY, A JOYCE STICK IS PROVIDED IN THE CABIN FOR VERTICAL HORIZONTAL MOVEMENT BY THE HOIST OPERATOR TO PLACE THE HELICOPTER EXACTLY OVER THE RECOVERY OBJECTIVE.

THE LOW LIGHT LEVEL TV AND DIRECT VIEWING DEVICE (DVD) ARE THE TWO TOP CONTENDERS FOR THE SEAOR 114 EQUIPAGE. BOTH PROVIDE EXCELLENT VIEWING UNDER EXTREMELY LOW LIGHT CONDITIONS SUCH AS A DARK NIGHT, NO MOON AND SCATTERED CLOUD CONDITIONS. UNDER THESE CONDITIONS BOTH UNITS ARE

CLAIMED TO HAVE

SECRET

SECRET

WORKING

CLAIMED TO HAVE THE CAPABILITY TO PICK OUT A MAN IN A WOODED AREA. BASICALLY, THE UNITS OPERATE ON LIGHT GATHERING AND INFRARED HEAT SOURCE INTERROGATION. THE CURRENT TREND, AS A RESULT OF EXTENSIVE TESTS ~~ON H-13 AND AT REPRESENTATIVE~~ IS TO PROVIDE THE GEMBLE MOUNTED ^{DIRECT VIEWING DEVICE} (DVD) SCOPE IN THE CABIN SECTION FOR THE FM/HOIST OPERATOR'S USE, AND THE LLLTV IN THE COCKPIT FOR PILOT - COPILOT OPERATION.

THE ~~UNIT/TYPE~~ (TERMINAL POINT IDENTIFICATION SYSTEM) IS STILL IN THE CONCEPTUAL STAGES OF DEVELOPMENT. IT WILL PROVIDE RANGE AND BEARING TO THE RESCUEE. IT IS A DIRECTION FINDING UNIT WHICH UNLIKE THE PRESENT DF UNITS, CAN FUNCTION ACCURATELY AT CLOSE RANGE. IT IS ENVISIONED THAT THE ANTENNAE UNITS WILL BE INCORPORATED AS AN INTEGRAL PART OF THE ROTOR BLADE ON THE HH53. ACCORDING TO UNITED AIRCRAFT CORP (SIKORSKY DIVISION) DEVELOPMENT OF THIS SYSTEM AND INCORPORATION INTO ARRS HH53'S REQUIRED 18 - 19 MONTHS LEAD TIME.

SI14- 418 CURRENTLY AIR FORCE IS PROGRAMMING EQUIPAGE OF 8 HH53'S
114 Equip WITH SEAGE 114 SYSTEMS, PREDICATED ON CONGRESSIONAL APPROVAL
20108 FOR FUNDING WHICH, AT THE TIME COSTS APPROXIMATELY 2.2
MILLION DOLLARS PER COPY OR 17.5 MILLION DOLLARS FOR THE
UNITED AC PACKAGE. THE HAS PROGRAMMED AN 18 - 19 MONTH DESIGN,

PRODUCTION, EQUIPAGE, DELIVERY

SECRET

PRODUCTION, EQUIPAGE, DELIVERY AND TEST PROGRAM AS SHOWN ON THIS CHART. THIS CHART IS PREDICATED UPON ZERO MONTH BEING THE MONTH OF CONGRESSIONAL ~~FINANCIAL~~ APPROVAL WHICH WILL BE THE GO-AHEAD FOR THIS PROGRAM:

-10 MONTHS ARE REQUIRED TO DESIGN THE SYSTEM, TOOLING, FABRICATION AND SYSTEM BENCH TEST.

-ON THE TENTH MONTH, THE SYSTEM WILL BE INSTALLED ON THE FIRST HH53C, THEREAFTER EQUIPPING ONE AIRCRAFT PER MONTH WITH THE COMPLETE SYSTEM.

-THE FIRST THREE HH53C'S WITH THIS SYSTEM ARE REQUIRED FOR THE ~~REQUIRE~~ 8 - 9 MONTH TEST AND QUALIFICATION PROGRAM.

-THE FOURTH HH53C WILL ALSO BE RETAINED TEMPORARILY BY THE CONTRACTOR TO PROVIDE MAINTENANCE AND AIRCREW GROUND AND FLIGHT TRAINING.

-THE FIFTH AND SIXTH AIRCRAFT WILL BE DELIVERED TO ARRS ON THE 16TH MONTH AND THE SEVENTH AND EIGHTH ACFT DELIVERED ON THE 17TH MONTH ALL WITH FULL SEAOR 114 EQUIPAGE. HOWEVER, UNTIL TESTING IS COMPLETED THE SYSTEMS WILL ONLY BE USED IN THE MANUAL MODE.

-THE LAST FOUR AIRCRAFT WILL BE DELIVERED TO ARRS IN THE 16TH AND 17TH MONTHS, AFTER TESTING IS COMPLETED. AT THIS TIME THE SYSTEM WILL BE FULLY QUALIFIED FOR OPERATIONAL USE IN THE FULL AUTOMATIC MODE. FOR THE SAKE OF DISCUSSION,

ASSUMING GO-AHEAD IN

SECRET

SECRET

ASSUMING GO-AHEAD IN JULY 1968 - ~~THIS SYSTEM~~
^{OPERATIONALLY}
WOULD NOT BE QUALIFIED ~~CONSTRUCTION DELIVERY~~ UNTIL
JAN 1970 ~~CONSTRUCTION~~.

TO PROVIDE A MORE TIMELY CAPABILITY, AIR FORCE HAS APPROVED
AN INTERIM NIGHT RECOVERY SYSTEM TO BE INSTALLED ON SIX
HH53B AIRCRAFT FOR SEA ~~CONSTRUCTION~~ AND TWO HH53B AT THE
48ABRSQ (TNG). THE INTERIM EQUIPAGE OF THE EIGHT HH53B'S
RECEIVED CONGRESSIONAL APPROVAL OF FUNDS, WHICH IN THIS
PROGRAM COSTS APPROXIMATELY 4.2 MILLION DOLLARS TOTAL.
THIS SYSTEM INCLUDES ONLY:

- THE LLLTV FOR THE COCKPIT
DIRECT VIEWING DEVICE
-AND FOR THE CABIN
- APPROACH AND HOVER COUPLER
- JOYCE STICK

SI44-42
Interim
00104

THIS PROGRAM WAS BASED ON A MARCH 68 GO-AHEAD AND THE
FOLLOWING PRODUCTION DELIVERY SCHEDULE IS USED FOR PROGRAMMING

- DESIGN, TOOL AND FABRICATION REQUIRES 4 MONTHS
- ONE HMM FROM BRLN MUST BE BAILED TO SIKORSKY IN AUGUST
1968 FOR REENTRY AND TEST PROGRAM WHICH WILL RUN THROUGH
JAN 69 (10 MON).

-AT THE END OF 10 MONTHS THE SYSTEM WILL BE QUALIFIED AND
SEVEN REENTRY HMM SENT TO THE FIELD FOR MODIFICATION OF THE
REMAINING 5 HMM. (ONE TO BRLN AND SIX TO SEA).

SIKORSKY WILL PROVIDE

SECRET

SECRET

SIKORSKY WILL LEAD THE RETROFIT TEAM TO THE FIELD.
THE CURRENT ESTIMATE ON RETROFIT OF THIS SYSTEM IS ~~15~~
15 DAYS PER KIT INSTALLATION, WHICH MEANS THAT ARRS ~~ARRS~~
~~ARRS~~ COULD HAVE THE LIMITED NIGHT RECOVERY SYSTEM IN
OPERATION BY FY 3/69

Slide 43 IN ADDITION TO SEAOR 114, ARRS HAS NUMEROUS OUTSTANDING
5 SEAORS
62587 SEAORS WHICH WILL IMPROVE THE OPERATIONAL CAPABILITY OF
THE SEA ~~ARR~~ FORCE. NOT ALL SEAORS RELATING TO ACR WERE
INITIATED BY ARRS, BUT WERE DERIVED FROM REQUIREMENTS
SPECIFIED BY OTHER AF, ARMY OR NAVY FORCES OPERATING IN
THE THEATER. FOLLOWING, ARE SOME ACTIONS IN WHICH WE -
RESCUE - HAVE A HIGH DEGREE OF INTEREST BECAUSE THEY HAVE
A DIRECT BEARING ON THE COMBAT ACR MISSION. SEAOR 93 WAS
ESTABLISHED IN JUN 67 FOR THE PURPOSE OF PROVIDING SAR
AIRCRAFT WITH A LIMITED ECM CAPABILITY TO ALLOW PENETRATION
OF DEVELOPED DEFENSIVE SYSTEMS OF NVN. THE ACR TASK FORCE
~~ARRS~~ MUST IN MANY INSTANCES PENETRATE DEEP IN ENEMY
TERRITORY TO EFFECT RECOVERY. THEREFORE SOME DEGREE OF
PROTECTION ^{AND} ~~WARNING~~ AGAINST SAM/OCI RADAR INSTALLATIONS
BECOMES NECESSARY. DUE TO SEVERE WEIGHT LIMITATIONS, THE
ARRS WILL PROBABLY GET ONLY AN ECM WARNING CAPABILITY. THE
ARRS HOWEVER, MAY WELL RECEIVE THE FULL COMPLEMENT OF
BOTH ACTIVE AND PASSIVE ECM DETECTION EQUIPMENT. THE EXACT

NATURE OF THE

SECRET

SECRET

NATURE OF THE EQUIPMENT CONFIGURATION FOR EACH AIRCRAFT HAVE YET TO BE DETERMINED. REASON FOR THE DELAY WAS THE ^{REQUIREMENT FOR} ~~BECOMING AVAILABLE FOR THE AIRCRAFT~~ A RADAR CROSS SECTION STUDY OF HELICOPTERS ^{ACCOMPLISHED BY CORNELL AERONAUTICAL LABS} ~~FOR THE AIR FORCE~~. THIS STUDY IS NOW COMPLETE AND EXACT CONFIGURATIONS FOR EACH TYPE AIRCRAFT SHOULD BE KNOWN SHORTLY. IT APPEARS THE ONLY PROBLEM THEN REMAINING WILL BE AVAILABILITY OF EQUIPMENTS DUE TO RELATIVE PRIORITIES AND HEAVY DEMAND FOR ALL AIRCRAFT. ^{HP}

SEACR 111 WAS ESTABLISHED 3 APR 67 AND PERTAINED TO 16 TYPES OF AIRCRAFT. ALL AIR RESCUE AIRCRAFT OPERATING IN SEA ARE EXPOSED TO GROUND FIRE ~~AS SOON AS~~ ON MOST SORTIES. EVEN ONE HIT IN A PARTIALLY FILLED FUEL CELL CAN RESULT IN A ~~CATASTROPHIC~~ FIRE AND/OR EXPLOSION WITH A CONSEQUENT LOSS OF THE AIRCRAFT AND CREW. ONE SOLUTION TO THIS PROBLEM WAS FOUND TO BE IN FILLING THE FUEL CELLS WITH RETICULATED POLYURETHANE FOAM AND THIS SOLUTION HAS BEEN ADOPTED TO FULFILL THE REQUIREMENTS OF THIS SEACR. THE FOAM WEIGHS APPROXIMATELY .27 LBS PER GAL ~~CAPACITY OF THE FUEL CELL~~ AND REDUCES ^{USEFUL} FUEL BY APPROXIMATELY 5%. ALL RESCUE AIRCRAFT OPERATING IN SEA ARE SCHEDULED TO BE RETROFITTED WITH THIS MATERIAL. ~~THE~~ ^{THIS} WAS ESTABLISHED PRIORITY 3 FOR THE HH3, 4 FOR THE HH53, 8 FOR THE HH53 AND 16 FOR THE HC-130. THROUGH IN-HOUSE AND AND ASSISTANCE AUXILIARY DROP TANKS OF THE HH53 HAVE ALREADY BEEN EQUIPPED.

SECRET

ALREADY BEEN DEVELOPED. SEACOR 11 WAS ESTABLISHED IN SEP 65 FOR THE PURPOSE OF PROVIDING MORE VERSATILE COMMUNICATIONS BETWEEN THE DOWNED AIRCREWMAN AND THE RESCUE VEHICLE. IT HAS THE ADVANTAGES OVER PRESENT RESCUE RADIOS OF BEING LIGHTER, SMALLER, AND MULTIPLE (FOUR) CHANNEL OPERATION AS OPPOSED TO SINGLE CHANNEL. HENCE, IT IS MUCH LESS VULNERABLE TO JAMMING. BECAUSE IT REPRESENTED AN IMPROVEMENT IN THE STATE-OF-THE-ART, MANY TECHNICAL, AS WELL AS FUNDING PROBLEMS WERE ENCOUNTERED. HOWEVER, PRODUCTION UNITS WILL BE AVAILABLE THIS MONTH STARTING AT A RATE OF 500 UNITS PER MONTH AND BUILDING UP TO 2000 UNITS PER MONTH BY AS OF SEPTEMBER 68. THE NEW RADIO IS ^{DESIGNATED AS} ~~NOMENCLATURE~~ THE AN/URC-64. SEACOR 46 WAS ESTABLISHED IN APR 66 AND CALLED FOR A COMBINATION DIRECTION FINDING AND RANGING SYSTEM. SUBSEQUENTLY, THE RANGING REQUIREMENT WAS DROPPED DUE TO OPERATIONAL AND TECHNOLOGY PROBLEMS. HOWEVER, IT WAS DECIDED THAT AN IMPROVED UHF-ADF BE DEVELOPED. THE NEW ADF CALLED THE AN/ARD-19 WILL REPLACE THE AN/ARA-25 IN SELECTED RESCUE/RESCORT AIRCRAFT. IT WILL BE FOUR CHANNEL ADF SO THAT IT WILL BE COMPLETELY COMPATIBLE WITH THE RADIO ~~BEING PROVIDED UNDER SEACOR 11~~. IT PROMISES IMPROVED ACCURACY ^{SHOWN BY} AND RANGE AND LESS VULNERABLE TO JAMMING. IT WILL SOLVE THE PROBLEM OF MULTIPLE TRANSMISSIONS ON THE SAME FREQUENCY.

FOUR SYSTEMS HAVE

SECRET

SECRET

FOUR SYSTEMS HAVE BEEN PROCURED AND ARE NOW IN FLIGHT
TEST AT ASD. ~~PRODUCTION OF THESE SYSTEMS IS BEING
ACCELERATED.~~ SEACOR 58 WAS ESTABLISHED IN SEP 66. IT CALLS FOR
A SELF-CONTAINED, HAND-OFF HELMET TRANSCEIVER FOR USE BY
PARARESCUE MEN WORKING UNDER HELICOPTERS. IT CONSISTS OF
A HOT MIKE AND RADIO RECEIVER ~~WHICH~~ THAT ~~IT~~ PROVIDES A HANDS-
OFF CAPABILITY. THIS WILL ALLOW THE PARARESCUEMAN COMPLETE
FREEDOM AND IN A COMBAT ENVIRONMENT THIS COULD MAKE THE
DIFFERENCE BETWEEN MISSION SUCCESS OR FAILURE. ~~THE~~
~~QUANTITIES REQUIRED FOR PRODUCTION~~ PRODUCTION
SCHEDULES ARE UNKNOWN AT THIS TIME. THE BASIC TRANSCEIVER
USES THE SAME RADIO MODULES AS THE URC-64 BEING BUILT UNDER
SEACOR 11.

ANOTHER DEFICIENCY IN ARCS CAPABILITY IN SEASIA WAS ~~IDENTIFIED~~
~~AS~~ THE HUH-1A SINGLE ENGINE SHORT RANGE HELICOPTER, WHICH
PROVED EXTREMELY VULNERABLE TO VIET CONG HOSTILE GROUND
FIRE. ~~THIS DEFICIENCY REQUIRED LONG~~ THIS DEFICIENCY REQUIRED LONG
AND THOROUGH RESEARCH/DEVELOPMENT AND TESTING TO FIND A
REPLACEMENT AIRCRAFT. THE REQUIREMENT WAS INITIATED
THROUGH THE ACTING (REQUIRED OPERATIONAL CAPABILITY.)

0146 44 THE FINAL CRITERIA FOR THE REPLACEMENT LBR IS A TWIN ENGINE
LBR/ROC
00012

HELICOPTER WITH INCREASED

SECRET

SECRET

HELICOPTER WITH INCREASED RANGE/SPEED/LIFT/HOVER CAPABILITY.^{AND}
THIS PROGRAM IS RECEIVING PRIORITY TREATMENT AT ALL ECHELONS
FROM HQ ARRS THRU AIR FORCE. THE LBR LOCATIONS WILL REMAIN
UNCHANGED. THE REPLACEMENT AIRCRAFT, HOWEVER, WILL
PROVIDE MORE FLEXIBILITY AND CAPABILITY WITH A RESULTANT
MODIFICATION TO INCREASE THE SCOPE OF THE CURRENT MISSION
DIRECTIVE AFR 55-18. HQ ARRS HAS PREPARED AND FORWARDED THE
LBR ROC - (REQUIRED OPERATIONAL CAPABILITY) TO HQ MAC FOR
COORDINATION AND PROCESSING. MAC, IN TURN FORWARDED THIS
ROC TO AF FOR REQUIRED ACTION.

- THE HH-43 AUTHORIZATION STILL REMAINS AT 150 UE.
ALTHOUGH ~~CURRENTLY~~^{THE} ARRS INVENTORY HAS ONLY 146 UE ASSIGNED,
THE AUTHORIZATION WILL BE MAINTAINED TO REFLECT ACTUAL
REQUIREMENTS, WHICH WILL BE THE BASIS FOR DETERMINING TOTAL
UE AUTHORIZATIONS FOR THE LBR REPLACEMENT AIRCRAFT. AIR
FORCE AND ARE CURRENTLY FORECASTING REPLACEMENT OF
THE HH-43 BY ~~BY~~^{OR} 70. AIRCRAFT UNDER CONSIDERATION AT THIS
TIME ARE THE ARMY TWIN HUEY AND THE NAVY UH-2 (TV IN SEASPRITE).

Slide 45 IN ADDITION TO RESPONSE TO ~~CHINA~~^{SEASPRITE} AND THE LBR ROC ACTIONS,
Current
Authoriza-AIR FORCE AND ~~AND~~ HAVE AUTHORIZED A "QUANTUM INCREASE
tions
00110 IN ARRS 55-18 AND 55-53 UE AUTHORIZATIONS IN DIRECT RESPONSE
TO AIR FORCE ~~REPLACEMENT~~ ACTIONS DATING BACK TO 1964.

AND AT THE SAME TIME.

SECRET

SECRET

AT THE SAME TIME, DICTATED A COMPARABLE DECREASE IN THE HH-3E AUTHORIZATION TO MAINTAIN AN END POSITION UE OF 56 HH-3E/HH-53. RECOGNIZING THAT THE TEMPO OF BOTH COMBAT AIRCREW RECOVERY AND MANNED/UNMANNED SPACE OPERATIONS WERE INCREASING AT A RAPID RATE, THIS HQ IN LATE 1964 DEVELOPED STUDIES TO DETERMINE FORCE REQUIREMENTS TO MEET THE EXPANDING RESCUE MISSION REQUIREMENTS. THE INITIAL STUDY, APPROVED BY THE AIR STAFF BOARD IN OCT 1965 SPECIFIED A REQUIREMENT FOR 91 UE HC-130 and 117 H-3 HELICOPTERS. ALTHOUGH THE 117 HELICOPTER REQUIREMENT SEEMED EXCESSIVE, ~~AT THAT TIME~~ THIS FORCE LEVEL WAS REQUIRED TO PROVIDE A TRUE GLOBAL RESCUE CAPABILITY INCLUDING A TWO FRONT COMBAT RECOVERY CAPABILITY. ~~THE~~ OFFICE OF THE SECRETARY OF DEFENSE, DISAPPROVED THE PROCUREMENT OF THE ADDITIONAL HC-130 UE AIRCRAFT BUT DID APPROVE PROCUREMENT OF 24 H-3 HELICOPTERS. FOLLOW-UP ACTIONS IN ^{THE} 1966 ~~PROGRAM~~ CHANCE REQUEST AND 1967 ~~PROGRAM~~, AT INPUT TO THE DRAFT PRESIDENTIAL MEMORANDUM, CONTINUED TO SPECIFY THE REQUIREMENT FOR 91 UE HC-130 AIRCRAFT. ~~THE~~ DUE TO TECHNOLOGICAL ADVANCES IN HELICOPTER CAPABILITY, THE ROTARY WING REQUIREMENT WAS MODIFIED TO A TOTAL OF 74 UE ~~HC-130/HH-53~~ AND AGAIN THIS REQUIREMENT WAS APPROVED BY AIR FORCE AND FORWARDED TO OSD FOR APPROVAL AND FUNDING AUTHORIZATION. THE OSD

SECRET

SECRET

AUTHORIZATION. THE OSD APPROVED FORCE STRUCTURE IS REFLECTED ON THIS VIEWGRAPH AND WILL BE PUBLISHED IN THE USAF PROGRAMMIN DOCUMENT 70-2 AND RELATED PROGRAMMED ALLOCATIONS DOCUMENT 70-2.

- IN FY 2/70 OUR HC-130 UE INCREASES TO 63, AND FUTHER INCREASES TO THE END POSITION OF 67 IN FY 8/71, INCREASING OUR OVERALL HC-130 UE BY 12 WITHIN A SIX MONTH PERIOD.

- THE HH-53 AUTHORIZATIONS HAVE BEEN INCREASED TO 38 UE BY FY 1/70, AND AS I MENTIONED A MOMENT AGO, INCREASE IN THE HH-53 FORCE WILL REQUIRE A COMPARABLE DECREASE IN THE HH-3E AUTHORIZATIONS, AS SHOWN ON THE FIRST LINE ENTRY, TO MAINTAIN THE AUTHORIZED 56 UE END POSITION FORCE STRUCTURE.

Slide 46
Force
Posture
FY 71
111 23
114 254
113 ✓

IN FY 71 OUR END POSITION FORCE POSTURE TO ACCOMMODATE THE INCREASED UE HC-130'S AND HH-53'S/HH-3E'S IS AS SHOWN ON THIS CHART, AND BEAR IN MIND WE ARE GOING ON THE BASIC ASSUMPTION THAT THE SEA COMMITMENT IS TERMINATED.

Slide 47
Theater
Augmt
00114

A BREAKOUT BY THEATER PROVIDES THIS BALANCED GLOBAL FORCE POSTURE:

	HC130H/P	HH3E	HH53
THEATER	25	9	8
OTHER (USCIB & BANGKOK)	21	9	18
(SUB.)	21	0	12

SECRET

SECRET

Slide 48A AS YOU NOTICE ON THIS VIEW GRAPH, OUR RESCUE FORCES ARE
Rerun 461

00113

PRIMARYLY CONCENTRATED IN A 25° BAND OF THE EARTH FROM
SEASIA TO THE MIDDLE EAST BOUNDED WITHIN 45°N AND 20°N
LATITUDES. THESE FORCES PROVIDE COVERAGE OVER THE PRIMARY
~~MISSIONS OF COMBATANT AND TACTICAL~~ USAF TACTICAL
AIRCRAFT ~~MISSIONS~~ DEPLOYMENT ROUTES. HOWEVER, WITH
THE ADVENT OF TRANSCONTINENTAL MILITARY AND COMMERCIAL
JET TRAFFIC, THE PRIMARY AIR TRAFFIC IS GRADUALLY SHIFTING
TO POLAR ROUTES WHICH PLACES THE FLIGHT PATHS OF THESE
AIRCRAFT WELL ABOVE 50° N LATITUDE FOR TRANSOCEANIC FLIGHTS.
CONCURRENTLY MILITARY STRATEGIC AND TACTICAL REQUIREMENTS
ARE SHIFTING TO THE POLAR ~~REGIONS~~ REGIONS. SUCH RECENT
REQUIREMENTS AS PROVIDING RESCUE COVERAGE FOR PERIPHERAL
AIR RESCUE MISSIONS IN THE BALTIC SEA/LAND MASS AREAS AND AIR
DEFENSE FIGHTERS ~~IN~~ ICELAND. MUST OF NECESSITY ~~DUE TO LIMITED~~
~~REQUIREMENTS~~ BE SATISFIED BY TDY OF AIRCRAFT AND AIRCREWS.

~~REQUIREMENTS~~. IN THE
CASE OF ICELAND, RESCUE COVERAGE IS BEING PROVIDED BY TDY
CREWS FROM THE 34 RESCUE RESERVE SQUADRON CALLED TO ACTIVE
DUTY IN FEB OF THIS YEAR. THE ARCTIC REGION IS THE ONE REGION
THAT ~~REQUIRES~~ REACTION RECOVERY CAPABILITY DUE TO
THE ~~EXTREME~~ ~~UNFAVORABLE~~ CONDITIONS. SURVIVAL TABLES COMPUTED
FOR LIFE ~~SUPPORT~~ OF AN INDIVIDUAL IN GOOD CONDITION, DOWNED

IN THE ~~TRANS~~ OCEANIC AREAS

Slide 48
Survival
Line 1
00246

SECRET

SECRET

IN ~~THESE~~ OCEANIC AREAS ARE DEPICTED ON THIS VIEWGRAPH.
~~AND~~ AS YOU CAN SEE, RECOVERY MUST BE EFFECTED IN THE ARCTIC
WITHIN 30 - 90 MINUTES TO ENSURE ANY DEGREE OF MISSION SUCCESS.
REPROGRAMMING OF ALREADY ESTABLISHED RESCUE FORCES TO
MEET THESE ESCALATING ARCTIC REQUIREMENTS CANNOT BE
ACCOMPLISHED WITHOUT JEOPARDIZING RESCUE RECOVERY
CAPABILITY IN THE OTHER AREAS, ~~OF THE CURRENTLY ESTABLISHED~~
~~REQUIREMENTS CURRENTLY IN EFFECT~~. THEREFORE, RESCUE,
MAC AND AIR FORCE WILL CONTINUE TO NEGOTIATE FOR ^{AN} INCREASE IN
RESCUE FORCES TO PROVIDE A TRUE GLOBAL CAPABILITY.

Slide 49 THE POSITIONING OF THESE HH-53/HH-3E'S COLOCATED WITH, OR
H53 IMMEDIATELY ADJACENT TO HC-130 LOCATIONS, PROVIDES A WELL-
Bal- BALANCED GLOBAL POSTURE TO RESPOND TO MOST SEARCH, RESCUE
down AND RECOVERY REQUIREMENTS WITHIN ^{existing} ~~THE CURRENT~~ CURRENT
00116 ✓ AIR ROUTES OF COMMUNICATIONS. ADDITIONALLY, THE HH-53'S
ARE STRATEGICALLY LOCATED TO SUPPORT THE U.S. MANNED
SPACE FLIGHT ^{HDL} ~~REQUIREMENTS~~ AND APOLLO OPERATIONS.
THIS TO ~~PROVIDE SUPPORT IN THE~~ ^{PLANNED} PLANNED LANDING AREAS AND ~~GENERAL~~ CONTINGENCY
AREAS
RECOVERY OPERATIONS, ~~WHICH ARE CURRENTLY IN EFFECT~~
RECOVERY

Slide 50 ✓ IN ACTUALITY ~~THE~~ HAS BEEN SUPPORTING THE MANNED SPACE
00100 FLIGHT PROGRAM SINCE ITS INCEPTION. A LOOK BACK INTO THE

COVERAGE PROVIDED THE

SECRET

SECRET

COVERAGE PROVIDED THE MERCURY AND GEMINI PROGRAMS REVEALS THAT THE LEVEL OF COVERAGE ^{INCREASED AS} ~~THE~~ THE AREA OF THE EARTH TRANSITED BY THE SPACECRAFT ^{EXPANDED.} ~~THE~~ IN THE LATTER STAGE OF THE GEMINI PROGRAM, ^{COVERAGE WAS REDUCED} ~~COVERAGE WAS REDUCED~~ AS NASA CONFIDENCE IN THE SYSTEM GREW, ^{AT THE SAME TIME} ~~THE~~ THE NUMBER OF AIRCRAFT IN THE ARCS INVENTORY WAS REDUCED. ^{EARLY PLANNING FOR COVERAGE}

Slide 51
Locations
00081

OF THE APOLLO PROGRAM CALLED FOR A TOTAL OF 46 IN-COMMISSION AIRCRAFT, 2 EACH AT 18 LOCATIONS FOR GLOBAL CONTINGENCY COVERAGE AND 10 MORE IN THE LAUNCH ABORT AND END OF MISSION AREAS. THIS COVERAGE HAS SINCE BEEN SUBSTANTIALLY REDUCED AS REFLECTED BY THIS NEXT SLIDE.

For APOLLO
7

IN OCT 1966 THE SECRETARY OF DEFENSE ADVISED THE ADMINISTRATOR OF THE NASA THAT ANY RESOURCES PURCHASED BY THE DEPARTMENT OF DEFENSE FOR THE SUPPORT OF NASA PROGRAMS MUST BE FUNDED OR REIMBURSED BY NASA. THIS PROBLEM IS CURRENTLY UNDER STUDY BY THE DEPARTMENT OF DEFENSE ^{AND} ~~THE~~ ~~WILL BE AVAILABLE AS AN~~ ~~DEPT TO THE OVERALL SAR STUDY.~~

Slide 52
Landing
Areas
00083

RECOVERY SERVICES REQUIRED FOR THE MANNED SPACE FLIGHT PROGRAM IS DIVIDED INTO TWO BASIC CATEGORIES, COVERAGE FOR PLANNED AREAS AND COVERAGE FOR CONTINGENCY AREAS. ^{PERMANENT} ~~PERMANENT~~

~~ADDITIONAL SERVICES~~

THIS SUPPORT CONSIST.

SECRET

AREA COVERAGE IS, OF COURSE, AT A HIGHER LEVEL OF SUPPORT
THAN THE CONTINGENCY AREA. THE PLANNED AREAS INCLUDE
THE LAUNCH SITE ABORT AREA, COVERED PRIMARILY BY
HELICOPTERS, SUPPORTED BY LAND AND AMPHIBIOUS VEHICLES;
THE LAUNCH ABORT AREA, SEVERAL THOUSAND MILES LONG,
COVERED BY FIXED WING AIRCRAFT, HELICOPTERS AND SHIPS; AND
SECONDARY PLANNED LANDING AREAS WHICH CAN BE ACTIVATED
PRIOR TO THE NORMAL END OF MISSION, AND FINALLY, THE
NORMAL END OF MISSION AREAS WHICH ARE ALSO COVERED BY
FIXED WING AIRCRAFT, HELICOPTERS AND SHIPS. THE NORMAL
PLANNED METHOD OF RECOVERY INCLUDES ASTRONAUT RECOVERY
BY HELICOPTER AND SPACECRAFT RECOVERY BY SHIP. THE INCREASED
RANGE OF THE AIR REFUELABLE HELICOPTERS NOW AVAILABLE MAKES
THE USE OF LAND BASED HELICOPTERS FOR ASTRONAUT RECOVERY
FEASIBLE, THIS PERMITTING USE OF A MUCH LESS SOPHISTICATED
TYPE SHIP TO RECOVER THE SPACECRAFT THAN NOW REQUIRED. RECOVERY
OF THE SPACECRAFT BY HELICOPTER IS BEING EXAMINED
JOINTLY BY THE ARMY AND NAVY IN CONCOMITANT TESTING, BEING
CONDUCTED BY THE ARMY WITH HH-33 HELICOPTERS AND NASA
WITH THE AIR FORCE WITH C-119 AIRCRAFT. THIS METHOD WILL PROBABLY
BE FEASIBLE FOR MOL SPACECRAFT RECOVERY
REQUIREMENTS. IT IS QUESTIONABLE THAT
THE LONG DISTANCE HAULS OF THE APOLLO
SPACECRAFT BY HELICOPTER

RECOVERY OF THE SPACECRAFT BY HELICOPTER IS BEING EXAMINED
FORWARD BY AIRCRAFT IN COMBAT-SWIFT TESTING, BEING
CONDUCTED ON THE AIRCRAFT HH-33 HELICOPTERS AND NASA
BELL-430 HELICOPTERS. THIS METHOD WILL PROBABLY
BE USED FOR MOL SPACECRAFT RECOVERY
IN THE FUTURE. IT IS QUESTIONABLE THAT
THESE HELICOPTERS CAN HANDLE LONG DISTANCE HAULS OF THE APOLLO

SPACECRAFT BY HELICOPTER

SECRET

ALERT COVERAGE DESCRIBES A PROGRAM TO PROVIDE SAR COVERAGE FOR USAF AIRCRAFT IN THE LOCAL AREA AND ADJACENT ROUTES. CAPABILITY TO RESPOND TO ANY OTHER SAR REQUIREMENT IS ~~ONLY~~ COINCIDENTAL, BUT DOES EXIST IN THE LOCAL AREAS, AND ALONG THE AIR ROUTES, AS A NATURAL ^{BY-PRODUCT} ~~BY-PRODUCT~~ ^{NORMAL} ~~BY-PRODUCT~~ OF THE AIR FORCE COVERAGE.

MOST AARS HC-130 SQUADRONS ARE AUTHORIZED 4 AIRCRAFT. OF THESE ONE IS USUALLY UNDERGOING A PHASE ~~(OR SCHEDULED) INSPECTION~~ INSPECTION. FOUR DAYS OUT OF FIVE, ONE OF THE IN-COMMISSION AIRCRAFT IS FLOWN ON A PRECAUTIONARY ORBIT ~~(SCHEDULED)~~ AND ANOTHER IS FLOWN ~~ON~~ ON A SPECIAL MISSION. THIS LEAVES ^{AIR} ONE CRAFT AT HOME FOR THE SAR ALERT AND TO PROVIDE SPECIALIZED PROFICIENCY TRAINING. OF THE THREE IN-COMMISSION AIRCRAFT, ONE HAS FROM 75 TO 50 HOURS REMAINING BEFORE NEXT PHASE INSPECTION, ONE 50 - 25 HRS, AND ONE 25 - 0 HRS. THE USUAL SITUATION IS THAT THE LOW TIME TO GO AIRCRAFT IS THE ONE ON ALERT AT THE HOME STATION BECAUSE ~~THE LOW TIME TO GO AIRCRAFT IS THE ONE ON ALERT AT THE HOME STATION BECAUSE~~ IT'S FLYING TIME CAN BE CONTROLLED DURING THE DAY. IT IS NOT UNUSUAL TO HAVE AN ALERT AIRCRAFT WITH NO MORE THAN ONE HR TO GO TO INSPECTION, AVAILABLE TO RESPOND TO A LOCAL EMERGENCY, BUT NOT IN ~~CHARGE OF THE AREA~~. CONSIDERING ALL OF THESE FACTORS, THE NORMAL SAR ALERT

SECRET

SECRET

THE NORMAL SAR ALERT INCLUDES AN AIRCRAFT APPROACHING
INSPECTION TIME AND A CREW ON OR RECENTLY RETURNED FROM A
TRAINING FLIGHT. ALTHOUGH THIS SAR ALERT SYSTEM IS NORMALLY
ABLE TO RESPOND TO THE LOCAL AND ROUTE EMERGENCIES, IT IS
USUALLY NOT CAPABLE OF TIMELY RESPONSE TO A GLOBALLY MANNED
SPACE FLIGHT RECOVERY REQUIREMENT AT ANY APPRECIABLE DISTANCE
FROM HOME STATION, WITHOUT SERIOUSLY ENDANGERING THE AIRCRAFT
AND CREW. THIS IS NOT DESIRABLE FOR AIRCRAFT SAFETY. IT
IS NOT CONSIDERED DESIRABLE TO PLAN OPERATIONS ON THIS BASIS.
IF A GLOBAL MANNED SPACE FLIGHT RECOVERY REQUIREMENT IS
IMPOSED ON AREA, AN AIRCRAFT AND A CREW OVER AND ABOVE
THESE AND OTHER MISSION REQUIREMENTS SHOULD BE IDENTIFIED
AT EACH STATION AFFECTED. THIS FORCE THEN COULD REMAIN
IN A "CREW RESTED" STATUS WITH A PROPERLY CONFIGURED
AIRCRAFT HAVING A SUFFICIENTLY HIGH NUMBER OF HOURS LEFT
TO PROVIDE AN ACCEPTABLE MARGIN OF SAFETY.
A PROPERLY CONFIGURED AIRCRAFT IS CONSIDERED TO BE ONE
EQUIPPED WITH AIRCRAFT FLotation COLLARS AND OTHER
EQUIPMENT, LONG RANGE TANKS, MINIMUM FUEL,
WITH SUFFICIENT LOCATION AND NAVIGATION GEAR,
MANNED BY CREW WITH THREE PARARESCUE MEN
WHO HAVE COMPLETED ACCOMPLISHED MANNED SPACE FLIGHT

RECOVERY MISSION TRAINING

SECRET

SECRET

RECOVERY MISSION TRAINING WITHIN THE LAST QUARTER.

Slide 55 THE SPACE AND CONTINGENCY WAR OPERATIONS TRANSCEND
Resource Mod GEOGRAPHIC AND THEATER BOUNDARIES NECESSITATING TIMELY
00117 ✓ REVISION OF ARRS ORGANIZATION, ^{OPERATIONAL} ~~CONCEPTS~~ CONCEPTS AND
MODERNIZATION OF THE FORCE. MAC/ARRS IS CONSTANTLY
EVALUATING, REVISING AND ENVISIONING NEW GOALS TO ENABLE
ARRS TO KEEP PACE WITH THE TECHNOLOGICAL DEVELOPMENTS
IN AEROSPACE SCIENCES. AS I MENTIONED, EQUIPMENT MODERNI-
ZATION STARTS WITH THE LBR REPLACEMENT AIRCRAFT, AND THIS
IS ONLY THE BEGINNING. FUTURE PROGRAMS CALL FOR THE DEVELOP-
MENT OF ^{AN} ~~ARRS~~ ADVANCED RESCUE SYSTEM (ARS) AIRCRAFT
BY MID 1970'S AND REPLACEMENT OF THE HC-130 WITH THE
HC-X IN THE LATE 70'S.

Slide 56 THE ARS CONCEPT IS TO DEVELOP A V/STOL, DAY/NIGHT AND
ARRS ✓ WEATHER-RESISTANT, LONG RANGE AIR-REFUELABLE AIRCRAFT.
00118 FROM THE OTHER AIRCRAFT WILL BE DESIGNED TO MEET
REQUIREMENTS TO ACCOMPANY AND SURVIVE IN THE
BATTLE ENVIRONMENT AS TACTICAL FIGHTER AIRCRAFT. IN ADDITION
IT WILL BE ABLE TO HOVER WITH AN ACCEPTABLE
RATE OF TURN REQUIRED TO EFFECT AIRCREW
RECOVERY.

THE REQUIREMENT FOR A

Slide 57 & ✓
57 A
Power
Down

SECRET

70119
70120

AN
THE REQUIREMENT FOR ~~AN~~ARS VEHICLE HAS ALREADY BEEN
ESTABLISHED, AND A REQUEST FOR PROPOSAL WAS ISSUED IN
MAY 1967. THE RESPONSE FROM INDUSTRY RESULTED IN A VARIETY
OF CONCEPTS FOR THE ~~ARS~~ VEHICLE SUCH AS THE STOWED ROTOR
YOU SEE HERE.

Slide 58
Tilt Meter
00124

ALSO
ADD THE TILT ROTOR SHOWN ON THIS SLIDE. WHEN THE EMPHASIS IS
BEING PLACED ON THE ARS DEVELOPMENT, THIS VEHICLE SHOULD BE
INTRODUCED INTO THE ARS INVENTORY BY 1975 TO REPLACE THE
~~HELICOPTER~~ THE COMBAT AIRCREW RECOVERY ROLE, BUT NOT FOR
HEAVY-LIFT RECOVERY MISSIONS SUCH AS APOLLO AND MOL.
THE ARS TRIMMED UP WITH THE HC-X FOR REFUELING WILL PROVIDE
THE LONG-RANGE, HIGH-SPEED ACR RECOVERY CAPABILITY REQUIRED
TO KEEP PACE WITH TACTICAL COMBAT OPERATIONS.

00123

IN LINE WITH THE EXPANDING GLOBAL MISSION, ARRS HAS AND IS CONTINUING TO UNDERGO ORGANIZATIONAL CHANGES. JUST LAST YEAR, THE TWO OVERSEAS CENTERS ASSUMED WING STATUS AND

100-100000
 100-100000
 100-100000
 100-100000

THE PAST FEBRUARY MAC DIRECTED A STUDY
TO ESTABLISH ONE WING AND
CENTERS TO SQUADRONS. THE CENTERS
WILL REMAIN AT THEIR PRESENT LOCATION
THE WING. THE WING WILL ALSO HAVE THE
SQUADRONS. [THE 3D AARGP PLUS
TWO SQUADRONS, ACCORDING

SECRET

SECRET

ALL BE ESTABLISHED IN THE CONUS POST-SEA DIRECTLY UNDER
HQ ARRS. THE JARRGP WILL BE THE PRIMARY PLANNING, LIAISON
AND INTELLIGENCE AGENCY WITH US STRIKE COMMAND AND OVERSEAS
USAF COMPONENT COMMANDERS, ~~FOR PREPARATION AND EXECUTION~~
~~OF CONTINGENCY WAR AND EXERCISE PLANS.~~ THE TWO SQUADRONS
WOULD PROVIDE THE NUCLEUS OF THE CONTINGENCY ACR FORCE.
~~FURTHER THEY WOULD TEST~~
ANALYZE, EVALUATE AND DEVELOP CONCEPTS OF OPERATIONS TO
SUPPORT TACTICAL GLOBAL CONTINGENCY WAR OPERATIONS.

Side of
Shield
022

THIS GENTLEMAN HAS BEEN A QUICK REVIEW OF OUR GLOBAL MISSION RESPONSIBILITIES PRIMARILY AIMED AT GIVING YOU A BETTER INSIGHT INTO OUR OPERATIONAL REQUIREMENTS, CAPABILITIES AND LIMITATIONS AT THIS TIME I WILL BE HAPPY TO ENTERTAIN ANY QUESTIONS YOU MAY HAVE RELATIVE TO THIS BRIEFING OR ANY OTHER ASPECT OF THE ARS MISSION AND RESPONSIBILITIES.

SECRET

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

SMC

Director Aerospce Studies Inst ATTN: Archives Branch Maxwell AFB, Alabama	RETURN TO:	7
--	------------	---

THIS PAGE IS UNCLASSIFIED

AIR RESCUE SERVICE BACKGROUND, CAPABILITIES AND REQUIREMENTS
BRIEFING

MADE BY COLONEL RUDOLPH TO HQ MATS

31 JANUARY 1964

PROJECT CORONA HARVEST

DO NOT DESTROY

CATALOGED

CATALOGED

No 0005807

"Reproduced on 4/1/69 by APXLR
by authority of ARXDC. Reproduced
Copy # 1 of 1 cy(s)."

FOR OFFICIAL USE ONLY

ATCH 2

226

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

AIR RESCUE SERVICE

Background, Capabilities and Requirements

I. INTRODUCTION:

The principal purpose of this briefing is to present a condensed analysis of the Air Rescue Service capabilities to accomplish its mission, with special emphasis placed on the capability within the Zone of Interior. Some background is necessary to place the analysis in proper perspective. Naturally, capability deficiencies represent requirements. My discussion will follow this connotation.

2. BACKGROUND:

At the end of the Korean War, ARS was a relatively large organization. It was overstrength in respect to its mission requirements. This condition continued until

CHART #1 ON - 1956 POSTURE

1956, when ARS consisted of 12 groups, and 37 squadrons. 3 of these groups located in the ZI consisted of 11 squadrons of 71 fixed-wing aircraft and 12 helicopters. These 3 groups were devoted primarily to military Search and Rescue in support of USAF ZI operations.

CHART #1 - OFF

FOR OFFICIAL USE ONLY

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

1-3524-3

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

In 1956 and again in 1958 and 1959 USAF directed a reduction in ARS strength. As a result all Units were eliminated and overseas strength was reduced to 2 squadrons and 7 detachments. Helicopters were eliminated from ARS with final phase-out in June 1960. Reclama action resulted in the restoration of one ZI fixed-wing squadron, at Eglin AFB. Retention of this squadron was based primarily on overseas air route support, training needs, and ZI/Overseas personnel rotation balance, rather than upon ZI Search and Rescue requirements.

CHART #2 ON - 1960 POSTURE

Search and Rescue or SAR in the United States was to be accomplished through the National Search and Rescue plan and the local base rescue helicopter capability. The National SAR Plan was Presidentially directed, and promulgated in 1956. It provided for centralized direction and control of all available SAR capability within the ZI when an incident occurred. The capability consisted of the Civil Air Patrol, "pick-up" military aircraft from any available source, ground search parties (military and civilian), law enforcement agencies, and other groups, public and private. While this provided for lots of effort and forces, there was little professional SAR capability provided.

CHART #2 - OFF

FOR OFFICIAL USE ONLY

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

USAF was made Executive Agent for the Inland Region under the National SAR Plan, the Inland Region refers only to the Continental US. CONAC was designated Inland SAR Coordinator, and exercised the function through 5 SAR Coordination Centers.

CHART #3 ON - LOCATION OF 5 CENTERS

CHART #3 - OFF

The new activated local base rescue function was parceled out to the individual commands.

In 1960, the McKee Board findings led to studies and recommendations that all rescue functions be consolidated under ARS. During 1960 and 1961, the LBR and National SAR functions were transferred to ARS. However, there are certain basic factors which should be made clear, as they bear directly and heavily upon the ARS SAR capability in the ZI. In respect to the National SAR, as in the past, there were no full time professional SAR forces available, except one ~~small~~ squadron at Eglin. In January 1962 the 41st Air Rescue Squadron was reactivated at Hamilton AFB. This squadron was not primarily reprogrammed for ZI SAR support. The 41st reactivation was oriented seaward; we got it to meet Pacific air route, Pacific Missile Range, and Alaskan and special high altitude sampling support requirements.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

The local base rescue units were tailored for aircraft crashes on and near the air base on which LBR is located. Although very capable in their primary mission, these units were not equipped for extended search, and they were not (and still are not) under the direct operational control of ARS.

3. CURRENT ZI CAPABILITY:

Currently ARS has centralized control and direction of all ZI SAR missions. This is accomplished through the 3 Air Rescue Centers, which replaced the 5 CONAC Centers. To do this job ARS has available only the professional resources shown on this chart.

CHART #4 ON - SHOW NA SQDNS AND 3 ZI ARC'S

EXPLAIN CHART - COVER ZI CENTERS

NAME SQUADRONS AND CENTER LOCATIONS
3 - HATS

- A. CENTER COMMANDERS
- B. SAR CMDRS WITHIN THEIR AREA OF RESPONSIBILITY
- C. SUPERVISE LBR PROGRAM

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

FOR OFFICIAL USE ONLY

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

The procedure is that these Air Rescue Centers will conduct SAR missions using the CAP, support aircraft from any available source, those local base rescue resources within range of a SAR incident, and any other military and civil capability available, this of course includes any ARS fixed-wing capability which can be on scene in time.

In practice, this all transpires, but not in such smooth fashion as in theory. Here's why. FIRST, whether it is in airlift, strategic bombardment, or rescue, there is no substitute for professionalism. Most of the resources involved in any given SAR incident are not professional forces. We must through necessity rely on the USAF trained Civil Air Patrol. This relationship has proven quite successful and to some degree fills the gap between ARS requirements and resources. SECOND, except for the vicinity of Eglin and Hamilton AFB's where Air Rescue Squadrons are located, the lack of ARS professional forces and deployment distance involved is a handicap in prosecuting any ZI mission. It is noted that during the recent B-52 crash in Maryland, it was necessary to bring in ARS resources from Goose Bay and Bermuda, as well as Eglin. THIRD, the aircraft with which our squadrons are equipped are completely unsuitable for searching over rugged terrain, wooded areas, and where there is deep snow. Our aircraft, while too slow for quick reaction, are too fast for visual survivor search where these handicaps exist.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

FOR OFFICIAL USE ONLY

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

This is especially acute as long as our primary search method is dependent upon human vision. Until electronic crash locator beacons and adequate individual aircrew locator beacons are in general use, visual sighting is our only means of locating downed airmen. FOURTH, although our LBR helicopters have been very successful in their primary mission, they are not designed for search duty. They are short range/endurance aircraft. They are not equipped to home on crash/individual locator devices; and, they are restricted from instrument flight. This frequently precludes their arriving on scene, and often limits search under marginal conditions.

ZI SAR shortcomings are not limited to the lack of professional forces. Nor are they limited to ARS. Outside the ARS purview, lack of aircrew rescue/survival techniques, training, and discipline compounds our difficulties. We need to go no further back than the B-52 accident cited earlier. One crew member stayed by his parachute, got out of his wet clothes and into his survival sleeping bag. Using an old type survival radio (URC-II), he talked a helicopter into visual contact and was saved. Two others left their parachutes, abandoned their survival gear, and died.

THIS
PAGE
IS
UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

As I stated before, there is no suitable aircraft in the ARS inventory to perform efficient search for individuals in rugged, or vegetation or snow covered terrain. This void has existed since general purpose, area coverage helicopters were phased out of the ARS inventory, by USAF Directive. The LBR helicopters can perform short range/duration, VFR, visual search only. The fixed-wing aircraft can accomplish medium range search overwater, desert, or similar terrain. For other search, comprising nearly all ZI requirements, there is a void, or at best a "gray" area. This "gray" area is covered by the capability provided by CAP and "pick-up" non-professional assistance. Although the Civil Air Patrol is, in our opinion, considered a SAR professional force, they too operate fixed-wing aircraft in most cases, and therefore fall generally into the same category as the ARS fixed-wing squadrons.

CHART #4A ON - ZI SAR OPERATIONAL STRUCTURE

EXPLAIN CHART

Despite this jerry-rig arrangement on what may appear to be a jumbled-up mess, we do get the job done a very large percent of the time. There is however the imposed and built-in calculated risk that will catch up with us at times.

CHART #4A - OFF

FOR OFFICIAL USE ONLY

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

I would now like to turn to the ARS

4. CURRENT OVERSEAS CAPABILITY:

You have seen how we looked in 1956 and in 1960, and what our current ZI posture is.

CHART #5 ON - CURRENT WORLD-WIDE POSTURE AND RESOURCES

This posture includes those North American based squadrons which I showed previously. Let me emphasize that these North American based squadrons are primarily postured, tailored, and utilized for missions other than ZI SAR. Also ARS has operational control of only the 4 NA units. All ARS squadrons located in the European Area are under the operational control of USAFE and answer to CINCEUR'S requirements. Pacific ARS Squadrons are operationally controlled by PACAF and answer to CINCPAC requirements. Our 64 world-wide local base rescue units, not shown on this chart, are operationally controlled by the Commander of the base on which they are located. Also not shown are two special detachments. (1) At Homestead AFB which controls ARS aircraft in support of Caribbean Recon missions, and (2) our detachment at Goodfellow AFB for recovery of the Balloon sampling operation. Around the world, to accomplish our missions we have 91 units on 79 bases. We maintain aircraft and territories outside the ZI. Please note our present population and UE aircraft.

CHART #5 - OFF

FOR OFFICIAL USE ONLY

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

ONLY

The functions our world-wide forces support are considerably more varied and extensive than is commonly known. The ARS mission, from AFR 20-54,

CHART #6 ON - BRIEF MISSION SUMMARY

covers the spectrum. / P A U S E / It includes the responsibility for recovery of aerospace hardware as well as personnel. The recovery of research and developmental hardware is also included, as well as normal command interest in and coordination on rescue/recovery R&D. Nevertheless, most people think of ARS as an organization which responds only to aircraft crashes to locate and aid survivors. The fact is that aid to survivors is not the heaviest workload of our missions, although the most compelling.

CHART #6 - OFF

CHART #7 ON - TABULAR LISTING OF OUR MISSIONS

The charges of AFR 20-54 lead to many missions. Here is an operational breakout of several of them. / P A U S E /
(AF #1 SUPPORT)

ARS always has a mission going on someplace. Last year we prosecuted 12,854 missions, or over 35 missions per day! 4 1/2 % of these daily missions were the emergency type. We go anywhere, to support anyone, anytime, although we are funded - and programmed only - for USAF support.

CHART #7 - OFF

FOR INTERNAL USE ONLY

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

ONLY

These USAF missions are supported in several ways: By precautionary strip alert (and there is always one aircraft at each squadron on immediate strip alert for emergencies). By special and additive strip alerts, (at home bases and deployed locations). By precautionary airborne orbital alert, along air routes, or along space capsule ground track; by airborne intercept and escort; by air search, location, and assistance, including the dropping of survival gear and the jumping of our pararescuemen onto land or into water. And, the world-wide local base rescue function.

ARS can perform these functions, but generally in less than the optimum fashion that we desire. There is one exception, the LBR mission, this we can do properly, as these units are properly equipped. Those functions with less than optimum capability are directly attributable to equipment short-comings. By way of comparison, if SAC's capability were on a par with ours, they would just now be preparing to transition from the B-29/50's into the B-36, with the B-47 still on the come! MATS would be progressing from the C-54 to the C-118; TAC from P-51 to F-80. However regardless of our present posture, through close management, ~~much~~ TDY, the constant shifting of aircraft and good maintenance capability, we provide the best recovery force possible.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

Let me briefly touch on 3 of our more used missions, one at a time, and see how the ARS capability looks. FIRST, precautionary strip alert: We maintain this as an emergency posture at each squadron and LBR location. When an incident occurs we proceed to the location. Our top speed is 160 - 180 knots, depending whether we are in an HU-16 or an HC-54. Time is critical in rescue and the initial period after an accident is the most critical. We regret that our reaction is not faster. SECOND, airborne precautionary orbit: Here again because of our slow speeds, we must launch hours ahead of the aircraft we are supporting in order to get on station in time. If those we are supporting, postpone or abort, we have already flown the majority of the mission. Once we are on station, if a fighter goes down halfway between orbit stations, we are faced again with slow reaction time. We simply cannot fly fast enough to escort the majority of disabled aircraft.

CHART #7A ON - COMPARISON OF PERFORMANCE OVER THE YEARS

This chart demonstrates our lack of capability progress over the years. / P A U S E / If the fighters can fly at all, we can't keep up; the bombers and transports run away from us with one or two engines out.

CHART #7A - OFF

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

NEXT IS SEARCH AND LOCATION: Overwater, although slow in arriving at the scene, visual or "eyeball" search capability is at its best. However, this falls for short of that desired. Our competent pararescuemen can and do jump under almost any conditions. I am sure you remember their deployment into the open seas to assist Commander Scott Carpenter. They have also secured 5 DISCOVERER capsules in the Pacific Ocean area which would otherwise have been lost, and they are continuously in action on the AMR.

Gentlemen, I have covered with you a short background on ARS and have indicated to you the basic capabilities of the ARS today.

If we are to meet our commitments in the future however we must improve this capability. We can readily identify 4 areas that require ^{immediate} ~~our~~ attention:

CHART #8 ON - Areas Requiring Improvement

- These are:
- (1) Area SAR Coverage
 - (2) Wartime SAR Mission
 - (3) National Space Projects Support
 - (4) Location & Communication

To a very great extent all 4 of these areas are overlapping. Therefore, I will not try to cover them each as a separate entity.

CHART #8 - OFF

FOR OFFICIAL USE ONLY

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CHART #9 - OFF~~ FOR USE ONLY

Our efforts to obtain a suitable overland search and recovery vehicle dates from the time helicopters were first phased out of ARS.

CHART #10 ON - RECAP OF EFFORTS TO OBTAIN AREA COVERAGE
HELOS

A Major stumbling block to this objective has been a widespread and consistent misunderstanding of helicopter roles, capabilities and LBR organizational and functional requirements.

CHART #10 - OFF

When we request general purpose area coverage helicopters, the fact that we have 150 helicopters in our inventory almost inevitably results in the reaction, "Why can't you use them?" There are several reasons, lack of range, lift limitation, lack of speed, VFR flight only, lack of adequate communication gear, not suitable for our war time mission, to name a few. But, let me say again that life saving, fire-suppression, LBR function that the HH-43B was bought to accomplish, - it ~~is~~ stops.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

ONLY

A long range, twin engine, heavy lift helicopter for the area job will provide ARS with the capability to accomplish overland SAR, balloon recovery, Cape Kennedy launch abort support - which by the way we are tasked by DOD to provide - and our wartime recovery mission.

Our wartime mission is to deny the enemy possession of our downed aircrews and to return these invaluable assets to US control by picking them up in the battle zone, and from within hostile territory. We ~~do not have this~~ capability. Our most capable LBR equipped HH-43B's would be marginal and then only after modification.

Another misunderstanding concerning helicopters plagues us. We need to have a mobile capability for the LBR's so they can readily deploy with the aircraft they are to support. This requirement has been confused with our requirement for mobile, area coverage, general purpose helicopters, to cover the "gray" areas I spoke of earlier, and for our wartime mission. Adding heavy helicopters such as the CH3C will give us some LBR requirement relief, since the CH3C can fill the LBR needs. The reverse is not the case, however.

Now let me briefly cover the NASA (and in the future, USAF) space support requirements.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

MERCURY support by ARS required up to 76 aircraft per shot. Many of these were borrowed, modified and unmodified, all at a high cost. None of these were as effective as basically rescue configured aircraft would have been. You know the limited ground track span of MERCURY as compared to GEMINI and APOLLO. APOLLO will traverse the earth from 40°N to 40°S, and encompass a landing footprint of 1000 NM x 5000 NM.

CHART #II ON - APOLLO FOOTPRINT

Yet we can support these projects with just 46 aircraft, as compared to 76 for MERCURY. We must, however, have HC-130H's to do the job. These aircraft will require 3 primary capabilities:

- (1) 2250 NM radius of action;
- (2) man-rated aerial retrieval system; and
- (3) spacecraft re-entry tracking capability.

7 to 9 HC-130H aircraft, with these capabilities, is expected to be able to "do the job" within a footprint such as this.

CHART #II - OFF

I am not implying that we require the HC-130H only for the National Space Program support. This aircraft is required to provide support for all of the ARS functions. The Space Program is very critical however and demands the capability provided by this aircraft.

Our efforts to obtain this capability have been strenuous and go back many years.

CHART #II ON - RECAP OF EFFORTS TO OBTAIN 130'S, GOING BACK TO '54 OR SO

FOR OFFICIAL USE ONLY

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

CHART # 12 ON - HC-130H REQUIREMENTS (78)
PROGRAMMED (60)
FUNDED (15)

This is the status of these aircraft. We must be successful in obtaining programming and funding action for those beyond the first 15.

CHART # 12 - OFF

Before going on to the next subject, may I show you our projected aircraft program.

CHART #13 ON - ACFT PROGRAM

The blue line represents our 30 HU-16 aircraft. Although 14 years old these aircraft are programmed to remain in ARS through the next 5 years. Yellow line, HC-97's. We expect to get 28 of these aircraft starting in April 64. ~~The last aircraft scheduled for ARS in Aug 64.~~ These aircraft are programmed to be an interim bird until the programmed HC-130's take their place. ~~Their~~ effectiveness will be marginal. The 36 HC-54 aircraft, green line, will also phase out as the HC-130 come into the inventory. The brown represents our projected HH3C helicopters. These 8 are projected to go, 4 to Goodfellow AFB for balloon recovery and 4 to Patrick AFB for AMR support.

CHART #13 - OFF

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

Last, we need electronics and communication gear, both for our own aircraft and for those we support.

CHART #14 ON - RESUME' OF ATTEMPTS TO OBTAIN CRASH AND PERSONAL LOCATOR BEACONS, AND PROPER COMMUNICATIONS GEAR

We can understand, although not support, delays in obtaining proper communications gear. It is difficult to demonstrate our needs except when a tragic incident occurs. Furthermore, there are many views as to what is best; ours has frequently failed to prevail.

/ P A U S E /

CHART #14 OFF

What does puzzle us, however, is why we can't get crash and personal locators. Since WW II, we can find no evidence of opposition to such gear. On the contrary, everyone agrees that it is needed. But we've spent so long awaiting the ultimate gear that for 18 years we've had no suitable beacons. We have had almost 100% success in the recovery of aerospace hardware. Beacons used in this hardware are in many cases very suitable to fill the requirement in question. In this equipment field we must buy the best available now; buy again when improvements come out, and continue to stay abreast. These are relatively small expenditures compared to the potential life savings that could be realized over the years.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

FOR OFFICIAL USE ONLY

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

Some place you have to stop waiting for the ultimate and buy equipment. Designs on paper save no lives. These beacons and an effective USAF program for their use are needed now. We have cost out the recent C-124 Pacific area search at 1.35 million dollars. Suitable beacons will cut this cost considerably.

CHART # 15 ON - SCHEMATIC OF 3 TYPES OF CAPABILITY WE NEED

Together with effective location beaconary and communications gear we require three basic types of SAR capability.

- a. Local Base Support. This we have in our LBR program, however the coverage is limited.
- b. Coverage of rugged, terrain, wooded areas and deep snow. Our capability is limited. Aircraft such as the HH-3C helicopters are required.
- c. Long Range Missions. Capability is limited. Will improve slightly with arrival of the HC-97. The HC-130 with the capabilities outlined is required.

CHART #15 - OFF

CHART #16 ON - BUILDUP OF % FLYING TIME DEVOTED TO MISSIONS

Our mission time percentage is building year after year. This chart indicates the growth over the last 6 years.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

FOR OFFICIAL USE ONLY

A recent official request to our using agencies for their predicted support requirements shows that they will continue to expand. CLEARWATER actions are expected to further raise these requirements.

/ P A U S E /

CHART #16 - OFF

In summary, if ARS capabilities are to reach the level our users expect and need, we have ~~to~~ to spend, in practically one package, the money that 14 years of neglect dictates. We must have equipment compatible with the systems we support, and the tasks we must accomplish.

Gentlemen - since the days of Kitty Hawk, man has had trouble in the air. I foresee nothing that will change this trend. If we are to aid these flyers, and I am sure that the US public will demand just that, a complete and effective search and recovery capability must be "in being".

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D


THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

DECLASSIFIED

~~SECRET~~

~~CONFIDENTIAL~~

Director Aerospace Studies Inst ATTN: Archives Branch Maxwell AFB, Alabama	RETURN TO: 
---	---

CLASSIFIED BY
1773
GENERAL DECLASSIFICATION
EFFECTIVE DATE
TWO YEAR

AIR RESCUE SERVICE BRIEFING

SOUTHEAST ASIA SAR REQUIREMENTS (1965)

17 Feb 1965

Presented to Comdr MATS
by Hq ARS

PROJECT CORONA HARVEST

DO NOT DESTROY

CATALOGED

CATALOGED

No 0005809

DOWNGRADED AT 3 YEAR INTERVAL
DECLASSIFIED AFTER 12 YEARS.
DOD DIR 5200.10

DECLASSIFIED

~~SECRET~~

ATCH 4

ARXDC-65-11

247

7-3884-1
17-4884-1

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL
DECLASSIFIED

GENERAL ESTES

GENTLEMEN

CHART #1 - ON (SEA AREA)

RETURN TO:

Director
Aerospace Studies Inst
ATTN: Archives Branch
Maxwell AFB, Alabama

IN THIS PRESENTATION WE WILL EVALUATE BOTH THE PACAF AND THE
ARS PROPOSALS TO MEET THE CURRENT AND PROJECTED SOUTHEAST ASIA
SEARCH, RESCUE AND RECOVERY REQUIREMENTS.

IN OCT 1964, HQ ARS REQUESTED THE PACIFIC AIR RESCUE CENTER (IN
ARS MSG ARXDC 50004, 5 OCT 64) TO DETERMINE AND PROJECT AS FAR AS
POSSIBLE INTO THE FUTURE THE SAR REQUIREMENTS IN SOUTHEAST ASIA.
IN REPLY, CINCPACAF AND PARC CONDUCTED A JOINT STUDY OF THESE
REQUIREMENTS AND SUBMITTED THEIR FINDINGS SIMULTANEOUSLY TO HQ
MATS AND HQ ARS (15 DEC 64). IT IS THIS REPLY, THAT WE HAVE ANALYZED
ALONG WITH THE GUIDELINES PROVIDED BY HQ MATS (MAXDC 50012, JAN 65).

CHART #1A - ON

THESE GUIDELINES ARE:

1. IDENTIFY ARS RESOURCES RECOMMENDED FOR DIVERSION, TO
SATISFY THE SEA REQUIREMENT.

2. DELINEATE IMPACT ON SUPPORT OF USAF REQUIREMENTS AS

DECLASSIFIED

CLASSIFIED BY
SUBJECT TO GENERAL DECLASSIFICATION
SCHEDULE OF EXECUTIVE ORDER 11652
EXEMPTED FROM AUTOMATICALLY DECLASSIFIED AT TWO YEAR
INTERVALS BEGINNING ON DECEMBER

31, 1973

CONFIDENTIAL

ARXDC 65-113

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

3. OUTLINE EXACTLY THE ARS COMMAND ARRANGEMENTS IN SEA.
4. CONSIDER THE ESTABLISHMENT OF A SQUADRON IN THE AREA.
5. IDENTIFY THE SPECIFIC AND TOTAL MANPOWER COSTS AS WELL AS A SOURCE OF THE SPACES.
6. TDY REQUIREMENT SHOULD BE ELIMINATED OR HELD TO A MINIMUM.
7. ESTIMATE OF AIRCRAFT PROCUREMENT MODIFICATION COSTS.

WE HAVE USED THESE 7 MATS GUIDES TO MEASURE BOTH THE PACAF PROPOSAL AND OUR (ARS) PROPOSAL.

CHART #2 - ON (SEA SAR MISSIONS)

HERE ARE THE MISSIONS FOR WHICH WE MUST PROVIDE COMBAT AIRCREW SAR COVERAGE.

CHART #3 - ON (SEA SAR MISSIONS)

CHART #4 - ON (SEA SAR MISSIONS)

CHART #5 - ON (S. E. ASIA MAP - BLACK & WHITE OUTLINE)

THIS CHART DEPICTS OUR POSTURE TODAY IN SEA.

PCS	3 HH-43F'S	DA NANG, RVN
PCS	3 HH-43F'S	KORAT, THAILAND
PCS (Det 3 - Control Element)		TAN SON NHUT, SAIGON

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

TDY	3 HH-43B'S	NAKHON PHANOM, THAILAND
TDY (ZI RESOURCE)	2 HH-43B'S	KORAT, THAILAND
TDY (ZI RESOURCE)	2 HH-43B'S	TAHKLI, THAILAND

CHART #5A - OVERLAY

SINCE JUNE 1964 WE HAVE ALSO DEPLOYED AS MANY AS 5 HU-16'S IN SEA FROM RESOURCES OF THE 31 ARSQ (CLARK) AND 33 ARSQ (OKINAWA). THESE AIRCRAFT ARE OPERATING TDY FROM DA NANG, RVN AND KORAT, THAILAND.

CHART #5B - ON

A TOTAL OF 86 MANPOWER SPACES ARE NOW AUTHORIZED IN RVN. 37 SPACES EACH FOR THE TWO HH-43F HELICOPTER DETACHMENTS AND 12 SPACES FOR DET 3, THE JSARC. DET 3 CONTROLS ALL OF THE ACTIONS OF THE 6 HH-43B'S, THE 7 UNMODIFIED HH-43B'S AND THE HU-16 TDY AIRCRAFT. THESE 18 AIRCRAFT AND THEIR ATTENDANT RESOURCES NOW REPRESENT THE TOTAL AIR RESCUE SERVICE SEA SAR FORCE.

CHART #6 - ON (PACAF PROPOSAL)

THIS SHOWS THE FORCE POSTURE RECOMMENDED BY PACAF.

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

(Starting in the North)	HH-3C	HH-43B	TOTAL
1. Da Nang, RVN	3	3	6
2. Pleiku, RVN	3		3
3. Bien Hoa, RVN	3	3	6
4. Can Tho, RVN	3		3
5. Nakhon Phanom	3		3
6. Korat, Thailand		2	2
7. Takhli, Thailand		2	2

PACAF'S TOTAL REQUIREMENT IS 25 HELICOPTERS

15 HH-3C'S

6 HH-43F'S

4 HH-43B'S

AND A CONTINUED EMPLOYMENT OF 5 TDY HU-16'S.

CHART #6A - OVERLAY - ON

IN THE PACAF SEA FORCE PROPOSAL, 30 AIRFRAMES WOULD BE REQUIRED,
WITH A MANPOWER ADDITIVE COST OF 370 SPACES.

UNTIL SUFFICIENT MODIFIED CH-3C AIRCRAFT CAN BE MADE AVAILABLE
PACAF REQUESTS THAT 12 ADDITIONAL HH-43F'S BE PLACED IN SEA.

1. 3 AT DA NANG
2. 3 AT PLEIKU
3. 3 AT BIEN HOA
4. 3 AT CAN THO

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

THIS REQUEST DOESN'T CHANGE THE TOTAL REQUIREMENT OF 30
AIRFRAMES - 25 HELICOPTERS AND 5 FIXED - WING AIRCRAFT.

IN OUR ANALYSIS OF THIS PROBLEM, WE CONCLUDED THAT NO COMMAND
STRUCTURE WOULD BE SATISFACTORY UNLESS A PCS SQUADRON WAS FORMED
IN THE AREA FOR POSITIVE COMMAND, CONTROL AND EFFECTIVE LOGISTIC
SUPPORT, THIS TO INCLUDE AIRCRAFT AND PERSONNEL. THE PACAF
PROPOSAL DID NOT SUGGEST A SEA SQUADRON NOR DID THEY RECOMMEND
AN ALL PCS FORCE. HOWEVER, HQ MATS GUIDELINES DID RECOMMEND THIS
BE CONSIDERED. WE BELIEVE IT A VALID REQUIREMENT, THEREFORE, THE
MANPOWER FIGURES SHOWN REFLECT AN ALL PCS FORCE INCLUDING A
SQUADRON.

(Also a Hq USAF msg recommended a PCS force)

CHART #7 - ON

FOLLOWING AN ALERTING MESSAGE FROM THE AIR FORCE CHIEF OF
STAFF TO HQ MATS AND HQ ARS, A MEETING WAS HELD AT ORLANDO AFB
BETWEEN HQ USAF PERSONNEL WORKING ON THIS PROGRAM AND
GENERAL WILLIAMS AND HIS STAFF. IN THIS MEETING WE CONSIDERED:

1. THE POSSIBILITY OF PLACING 6 COMBAT MODIFIED CH-3C'S IN
SEA INSTEAD OF 12 MODIFIED HH-43B'S, AND
2. TO WHAT EXTENT COULD THE CH-3C AIRCRAFT REPLACE THE
HU-16'S?

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

AT THIS MEETING IT WAS GENERALLY CONCLUDED THAT:

1. THE ALL-WEATHER CH-3C COULD REPLACE AND IMPROVE ON THE HU-16 AIRCRAFT'S CAPABILITY IN THOSE ITEMS THAT ARE PECULIAR TO THE HU-16, SUCH AS WATER RECOVERY.
2. THAT THE CH-3C CAN OBTAIN A 3-MINUTE ALERT POSITION.
3. THAT THE FIRE SUPPRESSION CAPABILITY OF THE CH-3C IS SIMILAR BUT GREATER THAN THAT OF THE HH-43B.
4. THAT THE HH-3C CAN PERFORM NIGHT, OVER-WATER RESCUE/RECOVERIES TRANSITING IFR WEATHER AND
5. THAT EVERY EFFORT SHOULD BE MADE TO PUT 6 CH-3C AIRCRAFT INTO SEA INSTEAD OF 12 ADDITIONAL HH-43B'S, AND THAT ADDITIONAL CH-3C'S BE SENT TO SEA AND REPLACE THE REMAINING HH-43B'S AND HU-16'S.

THIS IS OUR RECOMMENDED FORCE POSTURE. WE BELIEVE IT CAN BECOME A REALITY WITH A TIME-PHASED SERIES OF PROGRAMMED ACTIONS GEARED TO PLACE OPERATIONALLY READY SAR FORCES IN THE VIETNAM/ THAILAND COMPLEX BEGINNING IN FY 2/66 AND ACHIEVING THE END POSTURE OF A SOUTHEAST ASIA SQUADRON WITH 4 DETS OF 4 UE HH-3C'S EACH IN FY 4/66.

WE SUGGEST THAT 6 CH-3C'S FROM THE CURTAILED "SOUTH SHORE" TESTS COULD BE COMBAT MODIFIED BY JULY OF THIS YEAR. ATTENDANT RESOURCES, INCLUDING TRAINED PERSONNEL, COULD ALSO BE MADE

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

AVAILABLE FROM THE SAME SOURCE.

CONCURRENT WITH THIS PROPOSED PROGRAM, DET 3, PARC THE SEA CONTROL ELEMENT WOULD BE DISCONTINUED, AND THE COORDINATION CENTER FUNCTION ABSORBED AND CONTINUED IN THE SOUTHEAST ASIA SQUADRON. WE RECOMMEND THAT THE FIRST 3 MODIFIED HH-3C's BE PLACED AT BIEN HOA AND THE 2D THREE AT NAKHON PHANOM, AND THAT 10 ADDITIONAL MODIFIED HH-3C AIRCRAFT BE SENT TO SEA AS SOON AS POSSIBLE UNTIL A TOTAL OF 16 HH-3C HELICOPTERS ARE IN THE POSTURE NOTED ON THIS CHART. IN OUR OPINION THESE 16 AIRCRAFT HAVE THE CAPABILITY TO REPLACE THE COVERAGE NOW BEING PROVIDED BY THE HH-43'S AND THE HU-16'S. UNTIL PACAF HAS TIME TO COMPLETELY ACQUAINT THEMSELVES WITH THE CAPABILITIES OF THE HH-3C THEY MAY REQUIRE ONE OR TWO HU-16'S BE RETAINED IN THE SEA COMPLEX. WE BELIEVE, HOWEVER, THAT FOLLOWING A BREAKING-IN PERIOD, THE HU-16'S CAN RETIRE TO CLARK AND NAHA AIR BASES. IF ONE OR TWO HU-16'S ARE REQUIRED ON A CONTINUING BASIS, THE AIRCRAFT AND CREWS SHOULD BE TDY'D FROM THE HU-16 FLEET IN THE PACIFIC.

WE ESTIMATE THE ATTRITION RATE FOR THESE TWIN-TURBINE AIRCRAFT TO BE 25% OF THE RECOMMENDED FORCE COMPUTED OVER A 12-MONTH PERIOD IN THE COMBAT ENVIRONMENT. THUS, 4 COMBAT CONFIGURED HH-3C AIRCRAFT PER YEAR MUST BE PROGRAMMED AS REPLACEMENT FOR THOSE ATTRITED. THIS ATTRITION FACTOR IS ALMOST 50% LESS THAN THAT

CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

COMPUTED FOR THE COMBAT MODIFIED SINGLE-ENGINE HH-43F'S.

CHART #8A - OVERLAY

THIS UE FORCE OF 16 HH-3C AIRCRAFT WILL REQUIRE 192 ADDITIVE
MANPOWER SPACES (OR APPROXIMATELY 20 LBR IF WE PROVIDE THE SPACES)
THIS TO INCLUDE THE SEA SQUADRON REQUIREMENT.

CHART #9 - ON (RADIUS OF HH-43)
(VFR RADIUS - TALK)

CHART #9 - OVERLAY - ON (HH-43B)

THIS INDICATES THE IFR RADIUS OF ACTION OF THE HH-3C WITH 2
AUXILIARY TANKS. FLYING TIME TO 400 MILES OUT IS 3 + 40 HRS. WITHIN
ANY PART OF RVN THIS AIRCRAFT FROM ITS HOME BASE SHOULD BE ABLE
TO BE OVER A LAND RECOVERY AREA WITHIN AN HOUR OR LESS. FORWARD
STAGING OR PREPLANNED STRIP ALERT WILL CUT THIS TIME. FOR EXAMPLE:
DEPLOYING FROM OUR PROPOSED FIXED BASE AT TAKHLI, ONE HH-3C CAN
GIVE ON THE SPOT, 3 MINUTES OR LESS AIRBORNE FIRE SUPPRESSION RESCUE
SERVICE AT KORAT. ONE ADVANTAGE OF THE HH-3C AND ITS DEPLOYMENT
TO ADVANCED OPERATING LOCATIONS SUCH AS CAN THO OR PLEIKU, IS
THAT ON THE SPOT RESCUE COVERAGE IS AVAILABLE WITHOUT UNDULY
JEOPARDIZING THE MAIN RESCUE FORCE BECAUSE OF THE POOR AIRFIELD
SECURITY AT MOST ADVANCED BASES SUCH AS PLEIKU.

CHART #10 - ON (COMMAND ARRANGEMENT)

CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

THIS WIRING DIAGRAM SHOWS OUR RECOMMENDED COMMAND ARRANGEMENT. ONE SEA SQUADRON WOULD PROVIDE THE USAF CONTROL ELEMENT FOR THE JSARC. THE SQUADRON COMMANDER WOULD REPORT TO THE PACIFIC AIR RESCUE CENTER (OR PACIFIC WING COMMANDER).

CHART #11 - ON (MOD COSTS)

THE COST TO MODIFY THE HH-43B TO A COMBAT CONFIGURED "F" MODEL IS \$225,000 PER AIRFRAME. TO MODIFY THE CH-3C'S TO THE HH-3C COMBAT CONFIGURATION IS \$150,000 PER AIRFRAME FOR THE FIRST 6 AND \$35,000 THEREAFTER.

CHART #12 - ON

FROM A MANPOWER VIEWPOINT THE ARS PROPOSAL WILL PROVIDE THE NECESSARY SAR FORCE AT A CHEAPER COST. THESE MANPOWER FIGURES ON THIS CHART ARE ADDITIVE TO THOSE 86 NOW AUTHORIZED.

AT THIS TIME, I WOULD LIKE TO SHOW YOU A 4-MINUTE FILM OF THE CH-3C FIRE SUPPRESSION TEST AND THEN I WILL CONCLUDE WITH SOME COSTS FACTORS.

BACKGROUND MATERIAL FOR NARRATION ON FOOTAGE OF THE HH-3C
FIRE SUPPRESSION TEST

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

THIS IS THE NEW CH-3C SIKORSKY TWIN-TURBINE HELICOPTER NOW BEING USED IN LIMITED NUMBERS WITH THE AIR RESCUE SERVICE AT PATRICK AFB, FLA.

THE AIR RESCUE SERVICE WAS MADE RESPONSIBLE FOR CATEGORY III TESTING OF THIS NEW HELICOPTER, AND ONE PORTION OF THE TEST PROGRAM WAS TO INVESTIGATE THE FIRE SUPPRESSION POTENTIAL.

HERE TWO FIREFIGHTERS DEPLOY FROM THE '3C AND, AIDED BY THE HELICOPTER'S HIGH VELOCITY ROTOR DOWNWASH, USE THE FIRE SUPPRESSION KIT TO LAY A PATH OF FOAM TO THEIR OBJECTIVE - A MOCK-UP COCKPIT OF A CRASHED AIRCRAFT. THE EFFECT OF THE ROTOR-WASH IS CLEARLY VISIBLE IN THESE SCENES.

THESE MOTION PICTURES ARE FROM THE FIRST TESTS OF THE CH-3C IN THIS ROLE. THE TESTS WERE CONDUCTED UNDER A PRACTICALLY "NO WIND" CONDITION WHICH CONSIDERABLY LESSENS THE EFFECT OF THE ROTOR DOWNWASH. EVEN IN THIS SOMEWHAT ADVERSE CONDITION, THE FIREFIGHTERS INVOLVED IN THE TEST AGREED THAT THE NON-DIRECTIONAL NATURE OF THE CH-3C DOWNWASH WAS A GREAT BOON IN THAT IT AFFORDED THEM CONSTANT PROTECTION EVEN WHEN THE HELICOPTER WAS MANEUVERING BEHIND THEM.

THIS SCENE SHOWS THE HH-43B HELICOPTER FIGHTING A COMPARABLE FIRE UNDER IDENTICAL CIRCUMSTANCES.

CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

CHART #13 - ON

THE MOST COMPELLING RATIONALE IN OUR RECOMMENDED SEA SAR FORCE POSTURE IS THAT IT WOULD ACHIEVE THE FOLLOWING RESULTS:

- a. REDUCE THE ADDITIVE MANPOWER EXPENDITURE IN THE PACAF PROPOSAL BY 178 SPACES.
- b. REDUCE THE COST IN AIRFRAMES FROM 30 TO 16.
- c. REDUCE SUBSTANTIALLY THE AIRFRAME MODIFICATION COSTS. 1.2 MILLION VS 2.7 MILLION.
- d. ELIMINATE THE TDY LBR FORCES AND ELIMINATE OR GREATLY REDUCE THE HU-16 ROTATIONAL REQUIREMENT.
- e. IMPROVE LOGISTICS BY REDUCING THE NUMBER OF AIRCRAFT TYPES AND NUMBERS, AND FIXED-WING INSTALLATIONS. 5 OPERATING BASES IN ARS PROPOSAL VS 8 IN PACAF'S. ONE AIRCRAFT TYPE IN THE ARS PROPOSAL VS 4 IN PACAF'S.
- f. RESTORE BACK TO NORMAL THE LBR FORCES.
- g. IMPROVE OUR HIGH ALTITUDE OPERATING CAPABILITY AT CRITICAL LOCATIONS SUCH AS NELLIS, DAVIS-MONTHAN, etc, PROVIDING (since we can utilize the F's at these locations) A GREATER SAFETY FACTOR.
- h. A SUPERIOR OPERATIONAL CAPABILITY AT OVERALL REDUCED COSTS.

WE RECOMMEND THAT HQ USAF BE REQUESTED TO PROCEED FORWARD WITH IMPLEMENTING THE 16 HH-3C HELICOPTER CONCEPT FOR SEA.

CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

THIS TO INCLUDE 192 ADDED MANPOWER SPACES FOR AN "ALL PCS
OPERATION."

Cost HH-43B	\$467,000
<u>Modification</u>	<u>225,000</u>
	\$692,000

Cost CH-3C	\$860,000
<u>Modification</u>	<u>150,000</u>
1st 6	\$1,010,000
Next each	\$860,000
	<u>35,000</u>
	\$895,000

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

UNCLASSIFIED

Director	RETURN TO
Sec. 1	
Sec. 2	
Sec. 3	
Sec. 4	
Sec. 5	
Sec. 6	
Sec. 7	
Sec. 8	
Sec. 9	
Sec. 10	

THIS PAGE IS UNCLASSIFIED

AIR RESCUE SERVICE BRIEFING

17 September 1964

Presented to Hq MATS World-Wide Traffic Conference
by Col Rudolph

PROJECT CORONA HARVEST
DO NOT DESTROY

CATALOGED

No. 0005810

MIRACLES

Date

UNCLASSIFIED

ATCH 5

248

3084-5

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

General Coiner
General Cunningham
Gentlemen

UNCLASSIFIED

IT IS A PLEASURE TO HAVE THIS
OPPORTUNITY TO TALK TO YOU TONIGHT ABOUT AN
ORGANIZATION THAT I HAVE GROWN VERY FOND OF
SINCE MY ASSIGNMENT TWO YEARS AGO. WHEN I
WAS ASKED TO TALK TO YOU, IT WAS REQUESTED THAT
I SELECT MY OWN SUBJECT. AS GUIDANCE, IT WAS
INDICATED THAT THE TALK SHOULD BE EDUCATIONAL
BUT NOT TOO SERIOUS, THEREFORE, I HAVE TRIED
TO COMPLY WITH THIS REQUEST IN MY PREPARATION
FOR THIS PRESENTATION TONIGHT.

IN DISCUSSING THE AIR RESCUE
SERVICE, SOME OF MY STATEMENTS ARE MY OWN
VIEWS, AND, THEREFORE, SHOULD NOT BE CONSTRUED
TO REFLECT THE OFFICIAL VIEWS OF THE AIR RESCUE
SERVICE.

UNCLASSIFIED

THIS
PAGE
IS
UNCLASSIFIED

15-1115-1

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

TO PROVIDE A BASIC UNDERSTANDING FOR THOSE OF YOU WHO ARE NOT FAMILIAR WITH THE AIR RESCUE SERVICE, I WOULD LIKE TO COVER SUCH THINGS AS WHERE OUR UNITS ARE LOCATED, THE TYPE OF AIRCRAFT WE HAVE ASSIGNED, A FEW OF OUR MORE PERTINENT MISSIONS, AND OTHER DATA THAT WILL GIVE YOU A BROAD BASE OF UNDERSTANDING. FROM THERE, WE WILL LOOK AT "HOW WE ARE DOING", AND WHERE, I THINK, "WE ARE GOING."

THROUGHOUT THE AIR FORCE, THE AIR RESCUE SERVICE HAS THE REPUTATION OF SUPPLYING SEARCH AND RESCUE SERVICES TO PERSONS ONLY. I ASSURE YOU THAT THE MISSION OF ARS IS MUCH GREATER THAN THIS. THE AIR FORCE HAS CHARGED THIS COMMAND WITH THE RECOVERY OF AEROSPACE HARDWARE AS WELL AS THE HUMAN BEINGS, AND THIS IS THE GENERAL MISSION STATEMENT IN ITS BROADEST ASPECTS.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

TO BE MORE SPECIFIC, WE ARE CHARGED WITH OPERATING THE NATIONAL SEARCH AND RESCUE PLAN, WHICH DEALS WITH FINDING, RESCUING AND AIDING CIVILIAN AND MILITARY PERSONNEL WITHIN THE CONTINENTAL UNITED STATES AND ANY OTHER PLACE IN THE WORLD AS DIRECTED. THIS COULD BE A LOST HUNTER IN UTAH OR A DOWNED CIVILIAN AIRCRAFT IN THE SWAMPS OF FLORIDA.

THE COAST GUARD IS CHARGED WITH THE SAME MISSION AS IT PERTAINS TO WATER AREAS OF THE UNITED STATES. VERY FREQUENTLY YOU WILL FIND ARS AND THE COAST GUARD SUPPORTING EACH OTHER IN MANY OF THESE ACTIVITIES.

OUR RECOVERY FORCES ARE CONTINUALLY AT WORK ON THE AIR FORCE EASTERN TEST RANGE OPERATING OUT OF VARIOUS BASES IN THE CARIBBEAN AREA AND WE FIND OURSELVES FREQUENTLY INVOLVED IN ACTIVITIES ON THE WESTERN TEST RANGE IN THE HAWAIIAN AREA.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WE CONTINUALLY RESPOND TO THE RECOVERY OF
VARIOUS AND SUNDRY ITEMS OF AEROSPACE
HARDWARE THROUGHOUT THE WORLD. THEY ARE
TOO NUMEROUS TO MENTION IN THE SHORT TIME
I HAVE TONIGHT AND YOU UNDOUBTEDLY REALIZE
MANY OF THESE PROJECTS ARE HIGHLY CLASSIFIED.

WE ARE ALSO CHARGED WITH PLANNING
AND SUPERVISING THE EXECUTION OF A JOINT
HURRICANE EVACUATION PLAN. THIS PLAN INVOLVES
AIRCRAFT FROM ALL OF THE MILITARY SERVICES.
THOUSANDS OF AIRCRAFT HAVE BEEN EVACUATED
UNDER THIS PLAN. IN THE LAST FEW WEEKS OVER
²³⁰⁰
~~2000~~ MILITARY AIRCRAFT HAVE BEEN EVACUATED
BECAUSE OF HURRICANES "CLEO" AND "DORA".

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE AIR RESCUE SERVICE IS ONE OF THE SMALLEST COMMANDS IN THE UNITED STATES AIR FORCE. AT THE PRESENT TIME THERE ARE 87 UNITS LOCATED THROUGHOUT THE WORLD FROM TURKEY ON THE EAST TO THAILAND ON THE WEST. WE HAVE UNITS LOCATED AS FAR NORTH AS THULE AB, GREENLAND AND ELMENDORF, ALASKA, AND AS FAR SOUTH AS THE PANAMA CANAL ZONE. DETAILED EXAMINATION WILL INDICATE TO YOU THAT THE 87 SEPARATE SMALL AND DISTINCT ORGANIZATIONS ARE LOCATED IN 21 DIFFERENT COUNTRIES AND TERRITORIES OUTSIDE THE CONTINENTAL UNITED STATES. WE HAVE 7 PRIMARY AIR RESCUE CENTERS OF WHICH 4 ARE OUTSIDE THE CONTINENTAL UNITED STATES, THESE 4 SERVE THE 4 PRIME MILITARY OVERSEA COMMANDERS. THAT IS, THE ATLANTIC AIR RESCUE CENTER AT RAMSTEIN, GERMANY (SERVES EUROPE, AFRICA AND THE MIDDLE EAST.

THIS
PAGE
IS
UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE ALASKAN AIR RESCUE CENTER AT ELMENDORF, ALASKA (takes care of ALASKA); THE LATIN AMERICAN AIR RESCUE CENTER AT PANAMA (serves the AIR FORCES, SOUTH AREA), AND THE PACIFIC AIR RESCUE CENTER AT HICKAM AFB, HAWAII (takes Care OF THE PACAF AREA).

WITHIN THE CONTINENTAL US WE HAVE 3 AIR RESCUE CENTERS; AN EASTERN CENTER AT ROBINS AFB, GEORGIA; THE CENTRAL UNITED STATES IS COVERED BY A CENTER AT RICHARDS-GEBAUR AFB, KANSAS CITY, MISSOURI; AND THE WESTERN CENTER AT HAMILTON AFB, CALIFORNIA.

AT 12 OF THESE WORLD-WIDE LOCATIONS, WE HAVE SMALL FIXED WING SQUADRONS. THESE SQUADRONS ARE STRATEGICALLY LOCATED ALONG EAST/WEST AIR ROUTES THAT COVER THE WORLD.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WE HAVE 64 LBR UNITS LOCATED IN THE UNITED STATES AND OVERSEAS. THESE UNITS PROVIDE LOCAL BASE RESCUE COVERAGE FOR AND AROUND THE AIRBASE ON WHICH THEY ARE LOCATED.

AT ²⁴ OF THESE WORLD-WIDE LOCATIONS, WE HAVE CONTROLLERS AND/OR AIRCREW PERSONNEL STANDING BY ON ALERT 24-HRS A DAY, 7-DAYS A WEEK.

THE COMMAND GREW ^{18%} ~~24%~~ OVER THE LAST 18 MONTHS AND IS SCHEDULED TO GROW ANOTHER ^{36%} ~~20%~~ OVER THE NEXT 2 YEARS.

CURRENTLY WE ARE EQUIPPED WITH 36 HC-54 AIRCRAFT. THIS IS A C-54 MODIFIED FOR RESCUE PURPOSES.

WE HAVE 30 HU-16 AIRCRAFT. THIS IS A FLYING BOAT AFFAIR THAT CAN LAND AND TAKE-OFF ON WATER OR LAND.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WE ARE AUTHORIZED 150 SMALL
HH-43B HELICOPTERS PRIMARILY FOR USE IN OUR
LOCAL BASE RESCUE UNITS.

AT THE PRESENT TIME WE ARE RECEIVING
28 MODIFIED KC-97 AIRCRAFT THAT HAVE BEEN
MODIFIED TO A RESCUE VERSION. THESE AIRCRAFT
ARE BEING CALLED HC-97'S. THESE 28 AIRCRAFT
ARE ADDITIVE TO OUR INVENTORY AND ARE BEING
PROVIDED ON AN INTERIM BASIS UNTIL SUCH TIME
AS A MORE MODERN AIRCRAFT CAN BE PRODUCED
AND DELIVERED.

Total POPULATION OF THIS COMMAND
IS APPROXIMATELY 3100 AT THE PRESENT TIME.

LAST YEAR THE AIR RESCUE SERVICE
ACCOMPLISHED OVER 12,000 MISSIONS. 84%
OF THESE WERE IN SUPPORT OF USAF AIRCRAFT.
OF THE 12,000 PLUS MISSIONS, 423 WERE IN THE
EMERGENCY CATEGORY.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

LAST YEAR THE AIR RESCUE SERVICE IS CREDITED WITH SAVING 1,189 LIVES AND ASSISTING 3,248 OTHER PERSONS. ON ANY GIVEN DAY, AIR RESCUE PERSONNEL MAY BE PARTICIPATING IN A SEARCH FOR A DOWNED FIGHTER PILOT, AN EMERGENCY MEDICAL EVACUATION FROM A MERCHANT VESSEL IN THE SOUTH SEAS, A SEARCH FOR A MISSING FISHERMAN IN MICHIGAN OR THE ESCORT OF A CRIPPLED AIRLINER OVER THE ATLANTIC OCEAN. (CARDS)

MAY I NOW COVER A FEW OF OUR REQUIREMENTS ~~of~~ ^{for} THE FUTURE. ALTHOUGH THE AIR RESCUE SERVICE HAS BEEN INVOLVED IN THE MAN-IN-SPACE NATIONAL PROGRAM SINCE ITS START, THE NATIONAL AERONAUTICS SPACE ADMINISTRATION, STARTING THIS WINTER, WILL HAVE AN ALMOST CONTINUOUS STAND-BY REQUIREMENT FOR THE POSSIBLE RECOVERY OF THEIR MANNED SPACE VEHICLES.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

IN THIS PROGRAM WE ARE CHARGED WITH THE SUPPORT OF MISSILE ABORT AT CAPE KENNEDY AS WELL AS THE OPERATION OF AN AIR RECOVERY FORCE AROUND THE WORLD. WHEN A SPACECRAFT RETURNS FROM A MISSION, IT LANDS IN WHAT IS CALLED A FOOT-PRINT. WHEN THE SPACECRAFT ENTERS THE SENSIBLE ATMOSPHERE, COMPUTERS WILL PREDICT AN AREA IN WHICH THE SPACECRAFT WILL LAND. THE COMPUTER WILL, OF COURSE, PREDICT THE EXACT SPOT, HOWEVER, DIFFERENT VARIABLES AND ACTIONS CAN TAKE PLACE DURING THIS LANDING. THESE VARIABLES AND PROCEDURES MAKE IT POSSIBLE FOR THE SPACECRAFT TO OVERSHOOT AND UNDERSHOOT THIS EXACT LOCATION, HOWEVER THE SQUARE MILE AREA WITHIN THIS REALM CAN BE FORECAST. THE MERCURY SPACECRAFT WAS RELATIVELY SIMPLE INASMUCH AS THE FOOTPRINT WAS ONLY A 50 x 50 MILE AREA.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE GEMINI SPACECRAFT RECOVERY PROBLEM IS A LITTLE MORE SERIOUS SINCE ITS LANDING FOOTPRINT IS 100 X 500 MILES. APOLLO SPACECRAFT RECOVERY PRESENTS THE MOST DIFFICULT PROBLEM WITH A FOOTPRINT 1000 MILES WIDE AND 5000 MILES LONG. IT BECOMES NECESSARY, THEREFORE, FOR THE AIR RESCUE SERVICE TO HAVE AIRCRAFT THAT HAVE THE CAPABILITY TO FIND AND RECOVER THE SPACE VEHICLE UPON ITS RETURN TO THE EARTH'S SURFACE IN ANY SIZE FOOTPRINT AT ANY PLACE AROUND THE WORLD FROM 40°N TO 40°S LATITUDE. AS AN EXAMPLE, THIS FOOTPRINT COULD EXTEND FROM EAST OF BERMUDA TO WEST PAST HAWAII, OR FROM NEW ZEALAND EAST TO THE COAST OF SOUTH AMERICA, OR FROM THE MIDDLE OF BRAZIL EAST TO ADDIS ABABA, ETHIOPIA.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

IN ADDITION TO THE NASA RECOVERY REQUIREMENTS, THE AIR FORCE MANNED ORBITAL LABORATORY WILL START OPERATIONS IN SPACE IN THE LATE 60'S. THE RECOVERY OF THIS VEHICLE WILL ALSO BECOME THE JOB OF THE AIR RESCUE SERVICE. THE RE-ENTRY VEHICLE FOR THIS PROGRAM IS EXPECTED TO BE A MODIFIED GEMINI CAPSULE, THEREFORE, THE RECOVERY PROBLEM WILL FALL IN THE 500 MILE LANDING FOOTPRINT CATEGORY.

IN THE FUTURE WE WILL CONTINUE TO HAVE THE REQUIREMENT TO RECOVER CREW *members* ~~PERSONNEL~~ FROM FIGHTERS AND BOMBERS THAT MAY BE FORCED DOWN IN ANY PART OF THE WORLD. ALTHOUGH THE AIR RESCUE SERVICE IS NOT SPECIFICALLY CHARGED OR BUDGETED FOR THE RECOVERY OF ^{people} ~~PERSONNEL~~ ABOARD A DOWNED CIVILIAN AIRCRAFT, WE REALIZE ^{that} WHEN THIS DOES HAPPEN, WE ARE THE FIRST ORGANIZATION TO BE CALLED ON TO PROVIDE AID.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

AS POLAR AIR ROUTES ARE USED MORE BY CIVILIAN AIRCRAFT, WE REALIZE THAT WE MUST CONSIDER THE POSSIBILITY OF SOME DAY HAVING TO GO TO THE AID OF CIVILIAN AIRCRAFT THAT RUN INTO TROUBLE ALONG THESE AIR ROUTES.

WITHIN THE ACCOMPLISHMENT OF OUR PORTION OF THE NATIONAL SAR PLAN WE MUST CONTINUALLY SUPPORT AND COORDINATE A FORCE THAT IS CAPABLE OF PROVIDING AID TO ANY US ^{persons} ~~PERSONNEL~~ THAT MAY BECOME LOST WITHIN THE UNITED STATES OR OVERSEAS.

THE ACTUAL RECOVERY OF ASTRONAUTS OR ^{persons} ~~PERSONNEL~~ OPERATING IN OUTER SPACE ^{at} ~~IN~~ SOME FUTURE DATE WILL BECOME A REALITY. TO PLAN FOR THIS TYPE OF AN OPERATION, WE CONTINUALLY MAINTAIN LIAISON WITH AIR FORCE AND NASA PERSONNEL WORKING ON STUDIES HAVING TO DO WITH THIS PROBLEM.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

IN CONSIDERING OUR FORCE REQUIREMENTS FOR THE FUTURE, THEREFORE, WE MUST CONSIDER A FORCE STRUCTURE THAT WILL GIVE US THE GREATEST CAPABILITIES WITHIN THE GENERAL AREAS DISCUSSED, AND A FORCE STRUCTURE THAT CAN BE PROVIDED WITH THE GREATEST ECONOMY TO THE UNITED STATES TAX PAYER.

GENTLEMEN, THERE ARE 4 PRINCIPLES THAT MUST BE OBEYED IN RESCUE AND RECOVERY PROGRAMMING. THESE PRINCIPLES MUST BE PURSUED TO THE MAXIMUM IF THIS NATION IS TO IMPROVE ITS SEARCH AND RECOVERY CAPABILITY. AS I COVER THESE 4 DOCTRINAL ITEMS, PLEASE BEAR IN MIND THAT ^{2nd} ~~ONE~~ OF THE FOUR FALLS 100% WITHIN THE REALM OF THE CAPABILITY OF THE AIR RESCUE SERVICE, AND ONLY ONE OTHER IS PARTLY THE RESPONSIBILITY OF THE RESCUE FORCES.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE FIRST BASIC PRINCIPLE IS
DISCIPLINE. IT IS THE RESPONSIBILITY OF
ALL ORGANIZATIONS TO TRAIN THEIR PERSONNEL TO
THE POINT WHERE THEY WILL RESPOND TO THE
SITUATION. HEAVY SHOES ARE NO GOOD TO THE
down on a snow covered area
CREWMAN WHO DOES NOT WEAR THEM BECAUSE THEY
ARE UNCOMFORTABLE. SURVIVAL GEAR IS NO
GOOD TO A CREWMAN WHO LEAVES IT BEHIND AND
WANDERS OFF IN THE DARKNESS, AND AN EXPOSURE
SUIT IS NO GOOD UNLESS WORN. THE ACCOMPLISHMENT
OF THIS PRINCIPLE CANNOT BE PROVIDED BY THE
AIR RESCUE SERVICE. THE INDIVIDUAL MUST
TRAIN AND DISCIPLINE HIMSELF TO MEET THIS NEED.

THE WORD "SURVIVE" IS OUR SECOND
PRINCIPLE. PROPER EQUIPMENT MUST BE CARRIED
IN A READY STATE FOR USE WHEN REQUIRED. *The air crew member must* PLAN
AND TRAIN FOR A SEIGE OF SURVIVAL ON WHATEVER
ENVIRONMENT *he* ~~you~~ MAY BE SUBJECTED TO.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE AIR RESCUE SERVICE HAS LITTLE OR NO CONTROL OVER THIS ITEM. WE CAN ONLY SUPPLY THE TROUBLED PERSON WITH SURVIVAL EQUIPMENT AND THEN ONLY AFTER THE 3d PRINCIPLE "LOCATION" HAS BEEN ACCOMPLISHED. AT THIS POINT THE AIR RESCUE SERVICE COMES INTO THE PICTURE. THE AIR RESCUE SERVICE, UPON NOTIFICATION, WILL START TO LOCATE THE HUMAN WITH WHATEVER MEANS ~~THAT IS~~ AVAILABLE TO THE SERVICE AT THE TIME. HOWEVER, THE INDIVIDUAL BEING SEARCHED FOR MUST HELP IF AT ALL POSSIBLE. THE PERSON REQUIRING HELP MUST AT THIS TIME USE HIS TRAINING, DISCIPLINE, SURVIVAL EQUIPMENT AND KNOWLEDGE TO BE BEST OF HIS ABILITY DURING THIS CRITICAL PERIOD. THE EFFECTIVE USE OF HOMING BEACONRY IS A MUST IF THE EQUIPMENT IS AVAILABLE TO THE MAN IN DISTRESS. TWO BEACONS OF THIS TYPE ARE BEING PRODUCED OR EXPERIMENTED WITH AT THE PRESENT TIME.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

A PERSONAL LOCATOR BEACON THAT CAN BE CARRIED BY ~~REAR~~ CREW PERSONNEL IS BEING PRODUCED IN QUANTITY AT THE PRESENT TIME. THIS BEACON WAS FIRST REQUESTED BY THE AIR RESCUE SERVICE YEARS AGO, AND ONLY RECENTLY HAS ADDED EMPHASIS BEEN PLACED ON THE ACTUAL PROCUREMENT OF THIS EQUIPMENT. IT IS SAD TO REPORT THAT BEACONRY OF THIS TYPE COULD HAVE BEEN MADE AVAILABLE IN THE EARLY 50'S IF PROPER EMPHASIS HAD BEEN PLACED ON IT. A CRASH LOCATOR BEACON IS ALSO BEING EXPERIMENTED WITH, AND I BELIEVE WE CAN EXPECT THIS EQUIPMENT TO BE ABOARD USAF AIRCRAFT BY LATE 1966. ONCE AGAIN, IT IS SAD TO REPORT THAT THIS EQUIPMENT HAS BEEN USED IN CANADA FOR SEVERAL YEARS AND WAS ALSO FIRST REQUESTED BY ARS IN 1948.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WITHIN THE AREA OF HARDWARE RECOVERY, THE AIR RESCUE SERVICE HAS BEEN ABLE TO RECOVER APPROXIMATELY 98% OF ALL REQUIREMENTS. THIS HIGH PERCENTAGE HAS BEEN MADE POSSIBLE BY GOOD HOMING EQUIPMENT PROVIDED ON THE HARDWARE ITEM TO BE RECOVERED. THIS IS ONLY NATURAL SINCE MOST OF THE EMPHASIS AND MONEY OVER THE PAST ^{to 5} 4 YEARS HAS BEEN PLACED ON THE RECOVERY OF AEROSPACE HARDWARE.

THE PERCENTAGE OF ^{humans} ~~PERSONNEL~~ RECOVERED HAS BEEN EXTREMELY LOW. IT APPEARS TO ME THAT THIS COUNTRY FOR THE FIRST TIME IN ITS HISTORY, HAS PLACED A HIGHER VALUE ON HARDWARE THAN IT HAS ON HUMAN LIVES.

THE 4TH PRINCIPLE IS "RESCUE OR RECOVER" AND IN THIS AREA THE AIR RESCUE SERVICE IS THE PROFESSIONAL RESCUE AND RECOVERY FORCE FOR THE USAF.

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THE AIR RESCUE SERVICE DOES AND WILL CONTINUE TO ACCOMPLISH THESE DUTIES IN THE FINEST PROFESSIONAL MANNER COMMENSURATE WITH THE CAPABILITY OF THE RECOVERY EQUIPMENT THAT IS MADE AVAILABLE. I WISH TO POINT OUT, HOWEVER, THAT UNLESS THE OTHER 3 PRINCIPLES OF DISCIPLINE, SURVIVAL, AND LOCATION ARE CARRIED OUT, THE VERY FINE EFFORTS OF THE AIR RESCUE SERVICE MAY GO WASTED. ALL 4 OF THESE PRINCIPLES MUST THEREFORE BE CONSIDERED AS AN ENTITY IN THE AIR FORCE'S CONSIDERATION OF SEARCH, RESCUE AND RECOVERY. ALTHOUGH I DO NOT BELIEVE IT WISE OR FEASIBLE TO SUGGEST THE COMPLETE SINGLE MANAGING BY ANY ONE COMMAND OF THESE REQUIREMENTS AND FACILITIES, I DO SUGGEST, HOWEVER, THAT MORE EMPHASIS MUST BE PLACED ON SOME KIND OF OF AN INTEGRAL TRAINING AND EQUIPPING PROGRAM THAT WOULD ASSURE

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

COMPLETE STANDARDIZATION WITHIN THE PROCEDURES AND EQUIPMENT AREAS. I DO BELIEVE THAT THROUGH SOME AIR FORCE WIDE MANAGEMENT PROCEDURE THE AIR RESCUE SERVICE COULD AND SHOULD PLAY A MORE IMPORTANT ROLE IN THIS AREA.

A FLEET OF HC-130 AIRCRAFT CONFIGURED COMPLETELY FOR AIR SEARCH AND RECOVERY PURPOSES IS BEING PRODUCED BY THE LOCKHEED-GA CORP AT THE PRESENT TIME. THIS AIRCRAFT, FOR USE IN THE AIR RESCUE SERVICE, IS LONG OVERDUE. UNDER THE PRESENT PROGRAMMING, IT WILL BE LATE 1966 BEFORE THIS COMPLETE FORCE WILL BE IN-BEING. BY THAT TIME I FULLY EXPECT THAT THE C-130 AIRCRAFT WILL BE CONSIDERED IN THE OBSOLETE CATEGORY BY THE UNITED STATES AIR FORCE. WE MUST, THEREFORE, IMMEDIATELY START WORKING FOR A MORE ADVANCED SYSTEM OF RECOVERY.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

WE ARE TESTING AT THE PRESENT TIME AN ALL-WEATHER, LONG RANGE, HEAVY-LIFT CAPABLE HELICOPTER. IT IS IN THE 20,000 LB CATEGORY AND IS KNOWN AS THE CH-3C. WE HAVE RECENTLY REQUESTED THAT AN AIR-TO-AIR REFUELING CAPABILITY BE PROVIDED FOR IT. WE HAVE REQUESTED THAT THIS HELICOPTER BE AIR-TO-AIR REFUELED FROM OUR OWN HC-130 AIRCRAFT. IT IS OUR OPINION THAT THIS CAPABILITY CAN BE PROVIDED WITHIN THE MINIMUM OF TIME, AND IF THE HC-130/CH-3C SYSTEM CAN BE DEVELOPED, AND BOTH CONTRACTORS AGREE WITH US THAT IT CAN ~~EASILY~~ BE ACCOMPLISHED, IT WILL PROVIDE THE AIR RESCUE SERVICE WITH THE CAPABILITY TO GO ANY PLACE IN THE WORLD AND RECOVER ANY ITEM WITHIN THE LIFT CAPABILITY OF THE CH-3C HELICOPTER. THIS WILL GIVE THE RESCUE FORCES INDEPENDENCE FROM HARD SURFACE RUNWAYS, GASOLINE DISPERSAL & FIXED BASES.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

AS AN EXAMPLE, A STRATEGIC AIR COMMAND AIRCREW THAT MUST LEAVE THEIR AIRCRAFT ON THE ICE CAP COULD BE RECOVERED WITHIN THE MINIMUM OF TIME.

AS THIS NATION'S MILITARY TACTICAL FORCES BECOME MORE MOBILE AND SPEED BECOMES GREATER, WE FIND THAT BY VIRTUE OF THIS FORCE MOVEMENT SPEED, OUR WORLD-WIDE AREA COMMANDS ARE BECOMING SMALLER. WE, THEREFORE, MUST HAVE A RESCUE FORCE CAPABLE OF MOVING AS FAST, AS, OR FASTER THAN THE FORCE THAT WE SUPPORT. IN ANY ACCIDENT, IT IS EXTREMELY IMPORTANT THAT AID BE PROVIDED TO THE PERSONNEL INVOLVED AT THE EARLIEST POSSIBLE TIME. DEATH HAS A WAY OF NOT WAITING FOR A SLOW MOVING RESCUE FORCE.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

IT IS THEREFORE IMPERATIVE THAT THE UNITED STATES AIR FORCE, THE DEPARTMENT OF DEFENSE, AND THE UNITED STATES GOVERNMENT ESTABLISH A POLICY THAT WILL PROVIDE A DOD RESCUE AND RECOVERY FORCE WITH A CAPABILITY THAT WILL PROVIDE AID, WHEN REQUIRED, WITH THE LEAST POSSIBLE DELAY. THIS ESTABLISHED POLICY, BACKED UP WITH A REAL RESCUE AND RECOVERY CAPABILITY, PROVIDED NOT ONLY FOR THE UNITED STATES BUT OUR NEIGHBORS AS WELL WHEN THEY REQUEST^{it}, WILL RESOLVE FAVORABLE MANY OF OUR COLD WAR PROBLEMS. IT WILL INDICATE FACTUALLY AND COMPLETELY THAT THIS NATION PLACES ITS HIGHEST VALUE ON ITS PEOPLE - "THE HUMAN LIFE".

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED



[REDACTED]

RETURN TO

天
下
一
人

THIS PAGE IS UNCLASSIFIED

"DEEP LOOK" BRIEFING

PROJECT CORONA HARVEST
DO NOT DESTROY
CATALOGED
No. 0005812

**DOWNGRADED AT 9 YEAR INTERVALS
DECLASSIFIED AFTER 12 YEARS.
DDI DIR 3206.10**

~~SECRET~~ CLASSIFIED

ATCH 7

246

7-3184-6

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CONFIDENTIAL~~
~~SECRET~~

PERHAPS ONE OF THE BEST POINTS OF DEPARTURE FOR A
LOOK INTO THE FUTURE IS TO MAKE A BRIEF REVIEW OF THE PAST.

THE HISTORY OF THE AIR RESCUE SERVICE IS A SHORT
ONE, BUT IT IS FULL OF INTEREST AND PROVIDES A NUMBER OF
LESSONS WHICH CAN BE RELATED TO THE FUTURE. ONE OF THE
OBSERVATIONS WHICH CLEARLY EMERGES IS THE FACT THAT
RESCUE GETS A LOT OF ATTENTION WHEN THE SHOOTING STARTS,
BUT IS REGARDED AS MORE OF A LUXURY WHEN THE COMBAT
SITUATION EASES DOWN. IF YOU EXAMINE THE FORCES
SPECIFICALLY EMPLOYED FOR RESCUE SERVICE IN WORLD WAR II
WITH THOSE THAT EXISTED IN THE LATE 40'S, YOU RECEIVE A
CLEAR INDICATION OF WHAT HAPPENED. OF COURSE, THIS WAS
NOT UNIQUE - THE DRASTIC CUTBACKS OCCURRED THROUGHOUT
THE MILITARY SERVICE. AS A RESULT, JUST PRIOR TO KOREA,
RESCUE HAD ONLY A HAND FULL OF ASSORTED AIRCRAFT. _____
MONTHS LATER, THERE WERE 50 SQUADRONS AND 12 GROUPS
DEPLOYED ON A GLOBAL BASIS.

SLIDE # 1 ON

WHEN THE SHOOTING STOPPED, RESCUE WAS ONCE AGAIN
DRASTICALLY REDUCED IN SIZE - DOWN TO THE 12 SQUADRONS

~~CONFIDENTIAL~~

THAT WE HAVE

~~SECRET~~

DECLASSIFIED

THIS
PAGE
IS
UNCLASSIFIED

65-220

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

THAT WE HAVE TODAY. WHEN THE CONFLICT IN VIETNAM
STARTED, THE STORY WAS THE SAME - THERE WAS NO COMBAT
CAPABILITY IN THE RESCUE SERVICE. TWO YEARS AFTER THE
AIR FORCE HAD BEEN OPERATING IN VIETNAM, AND AT A
COST OF TWO AND A QUARTER MILLION DOLLARS, WE WERE
ABLE TO MUSTER A FORCE OF EXACTLY SIX SMALL HELICOPTERS -
HASTILY EQUIPPED WITH SUFFICIENT ARMOR TO PERMIT OUR
CREWS TO OPERATE IN A LIMITED COMBAT ENVIRONMENT.
THIS LITTLE GROUP IS DOING A MAGNIFICENT JOB, AND THE
REACTION OF OUR COMBAT AIRCREWS HAS BEEN MOST IMPRESSIVE,
BUT IT IS CERTAINLY A MEAGER EFFORT BY ANY STANDARD.

FROM PERSONAL OBSERVATION, I CAN ASSURE YOU THAT
RESCUE IS FULLY APPRECIATED IN SEA, AND OUR DEMONSTRATED
PROFESSIONALISM HAS WON THE RESPECT OF ALL CONCERNED.

SLIDE #1 OFF, SLIDE #2 ON

THE PROPOSAL TO PUT 16 LONG-RANGE COMBAT CONFIGURED
CH-30'S IN SOUTHEAST ASIA IS A NATURAL FOLLOW-ON AS WE
FINALLY COME UP TO SPEED. BUT IT IS A MATTER OF CONCERN
THAT COMBAT RESCUE FORCES ONCE AGAIN HAVE TO BE BUILT FROM
SCRATCH. IN TERMS OF WORLD WAR II AND KOREA, WE HAD
TIME. NOW THE SITUATION IS DIFFERENT. THE STRATEGIC AND

TACTICAL FORCES ARE

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

TACTICAL FORCES ARE KEPT IN A CONTINUOUS STATE OF READINESS, AND IT FOLLOWS ON THE BASIS OF SIMPLE LOGIC THAT RESCUE SERVICE - TO BE EFFECTIVE AND RESPONSIVE - MUST HAVE AN IN-BEING COMBAT AIRCREW RECOVERY CAPABILITY NOW IN THE FORESEEABLE FUTURE. THE SAME GENERAL SITUATION THAT PREVALLS IN VIETNAM COULD EASILY BE EXPERIENCED IN THE CONGO, SOUTH AMERICA, THE MIDDLE EAST, OR ELSEWHERE, AND THIS INCLUDES A VAST AREA OF THE WORLD.

SLIDE OFF - SLIDE #3 ON

FOR EXAMPLE, IN EUCOM AND PACOM ALONE, ARS IS TASKED IN 88 SEPARATE CONTINGENCY PLANS - MOST OF WHICH WILL REQUIRE A COMBAT RECOVERY FORCE. MANY COMMANDERS AND STAFF OFFICERS STILL HAVE MEMORIES OF RESCUE IN KOREA IN THE BACKS OF THEIR MINDS AND WITHOUT ACTUAL KNOWLEDGE OF THE SITUATION, SUBCONSCIOUSLY BELIEVE THAT ARS CAN RAPIDLY MUSTER A COMBAT FORCE TO DO THE JOB IN THE SAME MANNER. UNFORTUNATELY, SUCH TRAINED AND EQUIPPED FORCES SIMPLY DO NOT EXIST TODAY NOR CAN THEY BE MADE AVAILABLE VERY RAPIDLY, AS EVIDENCED BY THE VIETNAM SITUATION

WITH THIS SHORT LOOK AT WHERE WE HAVE BEEN, LET'S TAKE A LOOK AT WHERE WE ARE AND WHERE WE'RE GOING.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~

CONFIDENTIAL

SLIDE OFF - SLIDE #4 ON

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SLIDE OFF - SLIDE #4 ON

ARS INCLUDES 91 UNITS AT 87 LOCATIONS IN THE UNITED STATES AND 21 FOREIGN COUNTRIES. WITH THE RADIUS OF ACTION OF PRESENTLY ASSIGNED AIRCRAFT, WE CAN PROVIDE RAPID RESCUE COVERAGE FROM HOME BASES TO THE AREAS SHOWN HERE. FOR PRE-PLANNED MISSIONS, WE CAN PROVIDE COVERAGE WHERE AND WHEN NEEDED, BUT IT IS NECESSARY TO DIGRESS A MOMENT TO DISCUSS THE TERM RESCUE.

IN PLAIN LANGUAGE, IT MEANS TO PHYSICALLY PICK SOMEBODY UP AND DELIVERY THEM TO SAFETY. THIS MEANS ANY PERSON, INCLUDING THOSE INCAPABLE OF HELPING THEMSELVES. WE CAN DO THIS WITH THE HELICOPTERS AND, TO A LIMITED DEGREE, WITH THE HU-16.

SLIDE OFF - SLIDE #5 ON

WE SAY TO A LIMITED DEGREE, BECAUSE THE HU-16 CAN LAND ON THE WATER DURING DAYLIGHT ONLY, UNDER RELATIVELY SMOOTH SEA CONDITIONS (@ 500 MILES MAXIMUM). ALTHOUGH A FEW SAVES HAVE BEEN MADE RECENTLY OFF VIETNAM USING THE HU-16, WE HAVE TO ACKNOWLEDGE THAT CONDITIONS WERE JUST RIGHT. FOR EXAMPLE, DURING 1963 AND 1964, HU-16'S MADE ONLY 7 OPERATIONAL WATER LANDINGS SAVING A TOTAL OF

THIS
PAGE
IS
UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

5 PERSONNEL, AND NONE OF THESE WERE USAF CREWMEMBERS. THE HC-54 AND THE HC-97, OF COURSE, CAN'T EVEN DO THIS MUCH. THEIR CAPABILITY LIES IN FINDING THE INDIVIDUAL AND DROPPING EITHER PARARESCUE TEAMS OR SURVIVAL EQUIPMENT, THEN ARRANGING FOR SOME OTHER VEHICLE TO ACTUALLY RESCUE THEM. SO, IN REALITY, THESE AIRCRAFT ARE RENDERING AID OR ASSISTANCE - NOT RESCUE. THIS HAS BEEN AN ACCEPTABLE METHOD OF PROVIDING ASSISTANCE, PRIMARILY BECAUSE THERE WASN'T ANYTHING BETTER. THIS IS WHERE THE CHALLENGE LIES.

WITH THE GRADUAL BLENDING OF AERONAUTICS AND ASTRONAUTICS, IT HAS BECOME APPARENT THAT WE MUST EXTEND OUR RESCUE/RECOVERY RESOURCES TO COVER SPACE PROJECTS AS WELL AS AIR OPERATIONS.

SLIDE OFF - SLIDE #6 ON

CONCURRENTLY, WE ARE IN THE PROCESS OF RETIRING OUR AGED HC-54 AND HC-97'S AND REPLACING THEM WITH MODERN HC-130'S.

SLIDE OFF - SLIDE #7 ON

WE ALSO HAVE A HANDFUL OF CH-30'S AT PATRICK AFB TO PROVIDE AN EFFECTIVE RESCUE CAPABILITY IN CASE OF LAUNCH

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

PAD ABORT, AND TO PARTICIPATE IN MANY OTHER MISSIONS DIRECTLY CONNECTED WITH SPACE OPERATIONS. THIS PROGRAM IS A FIRST STEP IN THE RIGHT DIRECTION BUT IS CERTAINLY NOT AN END IN ITSELF. THIS SUBJECT WILL BE DISCUSSED FURTHER A LITTLE LATER ON. CONSIDER NOW, THE VARIOUS FUNCTIONAL RESPONSIBILITIES BY TYPES OF RESCUE AIRCRAFT AND THE VARIOUS INTER-RELATIONSHIPS.

SLIDE OFF - SLIDE #8 ON

FIRST, FIXED WING AIRCRAFT. AS OF THE FIRST OF JAN 1967, OUR CONVERSION TO HC-130 WILL HAVE BEEN COMPLETED AND THE HC-54'S AND HC-97'S RETIRED OR REASSIGNED TO RESERVE UNITS. AS CURRENTLY PROGRAMMED, THE FORCE WILL CONSIST OF 54 UE HC-130'S WITH 6 ADDITIONAL COMMAND SUPPORT AIRCRAFT AUGMENTED BY 30 HU-16'S WITH 4 ADDITIONAL FOR COMMAND SUPPORT. THIS WOULD BE AN EFFECTIVE FORCE FOR THE NORMAL DAY-TO-DAY FIXED WING MISSION OF PROVIDING PRECAUTIONARY AND EMERGENCY COVERAGE FOR DEPLOYING TACTICAL AIRCRAFT, AND OTHER AREA SEARCH AND RESCUE MISSIONS.

OVERLAY #1 .

BUT SUPERIMPOSED ON TOP OF THE NORMAL MISSION REQUIREMENTS IS THE SPACE RECOVERY MISSION WHICH REQUIRES

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

EXTENSIVE DEPLOYMENT, AS SHOWN ON THIS SLIDE. THIS IS TYPICAL OF THE DEPLOYMENT REQUIRED, HOWEVER, SPECIFIC LOCATIONS MAY CHANGE FROM TIME TO TIME DEPENDING ON THE PLANNED GROUND TRACK OF THE ORBITING SPACECRAFT. GENERALLY SPEAKING, HOWEVER, THIS FORCE MUST BE DEPLOYED SO AS TO LOCATE THE SPACECRAFT IN ANY LOCATION AROUND THE GLOBE FROM 40° N TO 40° S, AND THEN TO RECOVER OR RENDER AID TO THE CREW WITHIN AN 18-HR PERIOD AFTER THE SPACECRAFT HAS REENTERED THE EARTH'S ATMOSPHERE. THIS, OF COURSE, WOULD BE IN THE CASE OF CONTINGENCY RE-ENTRY FOR WHICH WE HAVE 36 ACFT DEPLOYED. IN ADDITION TO CONTINGENCY DEPLOYMENT, WE WILL ALSO PROVIDE 10 HC-130'S FOR PINPOINTING THE SPACECRAFT IN THE PLANNED LANDING AREA WHICH IN THE CASE OF

SLIDE OFF - SLIDE #9 ON

APOLLO MISSIONS HAVE A LANDING FOOTPRINT OF 1000 BY 5000 MILES. THE TOTAL REQUIREMENT ADDS UP TO 46 HC-130'S FOR THE SPACE RECOVERY MISSION. THIS EQUATES TO APPROXIMATELY 76% OF THE 60 AIRCRAFT FOR WHICH WE ARE PROGRAMMED. HOWEVER, 6 OF THIS NUMBER ARE COMMAND SUPPORT SO THAT AIRCRAFTS AND ADDITIONAL MAINTENANCE PERSONNEL MUST COME OUT OF OUR HIDE TO MEET THE 46 AIRCRAFT REQUIREMENT.

~~SECRET~~ CONFIDENTIAL

WE FEEL ONE

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

WE FEEL ONE OF THE FIRST ACTIONS WE MUST TAKE TO ESTABLISH AN EFFECTIVE SPACE RECOVERY FORCE IS TO HAVE THESE 6 COMMAND SUPPORT AIRCRAFT DESIGNATED AS UE. AT THESE DEPLOYED LOCATIONS OUR AUGMENTED CREWS AND MAINTENANCE PERSONNEL WILL BE ON CONTINUOUS RAPID REACTION ALERT FOR THE DURATION OF THE SPACE SHOT. AN ADDITIONAL SIX AIRCRAFT DESIGNATED AS UE WILL ALLEVIATE THIS SITUATION TO A DEGREE BY PROVIDING ADDITIONAL MANPOWER SPACES.

SLIDE OFF - SLIDE #10 ON

WHILE OUR HC-130 FLEET IS TOTALLY INVOLVED IN THE SPACE RECOVERY BUSINESS, THE REMAINDER OF THE RESCUE FLEET THEORETICALLY PICKS UP ALL REMAINING SEARCH, RESCUE AND RECOVERY MISSIONS. IN ACTUAL PRACTICE, THE HC-130'S ON SPACE ALERT WILL RESPOND TO AN EMERGENCY REQUIREMENT OF ANY SORT SO THAT, IN FACT, OUR BASE AREA OF OPERATIONS AROUND THE GLOBE IS EXPANDED. HOWEVER, THE ACTUAL NUMBERS OF AIRCRAFT ON THE LINES OF COMMUNICATION ARE DIMINISHED, AND, IN FACT, DIMINISHED TO AN UNACCEPTABLE DEGREE.

SLIDE OFF - SLIDE #11 ON

DEPLOYMENT OF THE IN-COMMISSION HC-130 FLEET WILL LEAVE 30 HU-16'S IN FOUR SQUADRONS TO RESPOND TO ALL

~~SECRET~~ CONFIDENTIAL
OTHER IISAF

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

OTHER USAF SAR REQUIREMENTS AROUND THE GLOBE.

OVERLAY #1

THREE OF THESE, BY TAIL NUMBER, ARE ASSIGNED TO THE HU-16 SCHOOL AT EGLIN WHERE THEY ARE REQUIRED TO INSURE THE FLOW OF QUALIFIED PERSONNEL TO OUR OVERSEAS HU-16 UNITS. APPLYING THE STANDARD IN-COMMISSION RATE OF 71% TO THE REMAINDER OF 27,

OVERLAY #2

WE COME UP WITH 19 AIRCRAFT FOR THE TOTAL NORMAL SAR FUNCTION.

OVERLAY #3

FIVE OF THESE ARE DEPLOYED IN VIETNAM ON A ROTATIONAL BASIS, LEAVING A TOTAL OF 14 AVAILABLE.

OVERLAY #4

TWO ARE ON CONTINUOUS DEPLOYMENT TO HOMESTEAD AFB FOR CARIBBEAN COVERAGE, WHICH IS AN INDEFINITE COMMITMENT, LEAVING 12 AVAILABLE WORLD-WIDE.

OVERLAY #5

OF THESE 12, FIVE WILL BE REQUIRED FOR EMERGENCY ALERT AT EACH SQUADRON LOCATION NOT COVERED BY THE HC-130

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL
~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

FLEET, LEAVING AN AVERAGE OF 7 HU-16'S PER DAY.

OVERLAY #6

ADVANCED BASE STRIP ALERT REQUIREMENTS OF 3 AIRCRAFT PER DAY DIMINISH THIS NUMBER TO 4 HU-16'S TO MEET ALL OTHER USAF GLOBAL REQUIREMENTS, OTHER THAN EMERGENCY. EVEN THIS FIGURE IS SOMEWHAT SUSPECT IF WE CAN JUDGE BY RECENT IRAN AVERAGES OF 7 HU-16'S AT A GIVEN TIME, WHICH IS 3 MORE THAN THE 4 AIRCRAFT COMMAND SUPPORT CUSHION. POSSIBLY A REACTION TO THIS RUNDOWN COULD BE SOMETHING LIKE - YOU CAN PROVE ANTHING BY USING STATISTICS TO SHOW A POINT - AND BESIDES, THESE SPACE SHOTS ARE ONLY FOR A COUPLE OF DAYS, ANYHOW. LET ME DISPELL SUCH A THOUGHT TREND, IF IT EXISTS.

FIRST, THESE ARE AIRFRAMES WE'RE TALKING ABOUT - NOT STATISTICS - AND, AS MUCH AS WE'D LIKE TO, WE CAN'T JUGGLE AIRFRAMES LIKE WE MANIPULATE STATISTICS. SECONDLY, WE'RE NOT TALKING ABOUT PERIODS OF TWO OR THREE DAYS FOR SPACE RECOVERY DEPLOYMENT BECAUSE DURING THIS PERIOD WE'RE COMING INTO A SITUATION WHERE THE SPACE PROGRAMS OVERLAP -

SLIDE OFF - SLIDE #12 ON

CONFIDENTIAL

GEMINI, APOLLO

~~SECRET~~

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

GEMINI, APOLLO AND MOL - AND SO DO OUR DEPLOYMENT REQUIPEMENTS. THE FREQUENCY AND OVERLAP OF SPACE LAUNCHES INCREASES THROUGH 1967, UNTIL IN 1968, THE HC-130 FLEET WILL BE DEPLOYED AT LEAST 50% OF THE TIME. FOR EXAMPLE, IN JULY, AUGUST AND SEPTEMBER OF 1968, TENTATIVE SCHEDULES CALL FOR TWO APOLLO LUNAR MISSIONS OF 10 DAYS EACH AND ONE MOL MISSION OF 30 DAYS. THESE COULD OCCUR ALL IN THE SAME 30 DAY PERIOD, BUT WE HAVE TO PLAN FOR THE WORST SITUATION. BY TACKING ON THREE DAYS ON EACH END OF EACH MISSION FOR DEPLOYING, RE-DEPLOYING AND EXERCISING, IT IS POSSIBLE THAT THE HC-130'S WILL BE DEPLOYED 75% OF THE TIME. IN EITHER CASE, IN EXCESS OF 50% APPEARS TO BE A REASONABLE ASSUMPTION. BY 1970, CURRENT FOPECASTS LEAD US TO BELIEVE THAT THERE WILL BE MEN IN SPACE CONTINUOUSLY AND, AT ANY TIME, AT ANY LOCATION AROUND THE GLOBE, AN EMERGENCY IN THE SPACECRAFT MAY REQUIRE IMMEDIATE RE-ENTRY FOR A CONTINGENCY LANDING. THIS MEANS CONTINGENCY DEPLOYMENT 100% OF THE TIME WHEN THIS COMES TO PASS.

THIS THEN, IS HOW THE FUTURE LOOKS FOR THE FIXED-WING AIRCRAFT IN AIR RESCUE SERVICE AS CURRENTLY PROGRAMMED - AND IT LOOKS DIM, UNLESS SUFFICIENT ADDITIONAL RESOURCES ARE MADE AVAILABLE TO DO THE JOB PROFESSIONALLY.

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SLIDE OFF - SLIDE #13 ON

SPECIFICALLY, AN AUGMENTATION OF 41 UE HC-130H AIRCRAFT IS REQUIRED TO REPLACE THE HU-16'S STARTING IN THE THIRD QUARTER OF FISCAL 67. THE HU-16 HAS PLAYED AN IMPORTANT ROLE IN RESCUE IN THE PAST BUT IS TIME-WORN, OBSOLESCEANT, AND INCREASINGLY DIFFICULT AND COSTLY TO MAINTAIN. THE USAF IG RECOGNIZED THIS IN THEIR RECENT APS CAPABILITY REPORT, AND FIRM ACTIONS MUST BE TAKEN NOW IF WE ARE TO PROGRAM REPLACEMENT IN FISCAL 67.

OVERLAY #1

THESE ADDITIONAL HC-130'S WILL BE ASSIGNED TO EXISTING SQUADRONS, WITH THE EXCEPTION OF FIVE AIRCRAFT, WHICH WILL FORM THE FIXED WING ELEMENT OF A SQUADRON TO BE ACTIVATED IN ALASKA. JUSTIFICATION FOR THIS NEW UNIT IS CONTAINED IN THE DOCUMENT BUT, SIMPLY STATED, THERE IS A LARGE GAP IN RESCUE CAPABILITY IN THE POLAR REGIONS WITH SUFFICIENT AND SIGNIFICANT MILITARY TRAFFIC TO JUSTIFY THE ESTABLISHMENT OF A NEW UNIT. WITH THIS UNIT IN ALASKA, LONG RANGE HELICOPTERS AT THULE AB, AND THE 67TH SQ OPERATING FROM PRESTWICK, WE WILL HAVE A CAPABILITY TO COVER THE ENTIRE NORTH POLAR REGION, AS SHOWN ON THIS SLIDE.

CONFIDENTIAL

~~SECRET~~

SLIDE OFF - SLIDE #14 ON

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SLIDE OFF - SLIDE # 14 ON

OUR HELICOPTER REQUIREMENTS WILL BE DETAILED SHORTLY BUT FIRST; TO SUMMARIZE THE FIXED WING AIRCRAFT REQUIREMENTS WE BELIEVE THE FOLLOWING ACTIONS ARE REQUIRED TO PROVIDE THE AIRCRAFT NECESSARY TO MEET ASSIGNED FIXED-WING MISSIONS:

SLIDE OFF - SLIDE #15 ON

1. RE-DESIGNATE THE SIX HC-130H COMMAND SUPPORT AIRCRAFT AS UE AIRCRAFT.
2. COMMENCE PHASE-OUT OF THE HU-16, STARTING IN FQ 3/67.
3. REPLACE THE HU-16'S WITH HC-130H'S, BUILDING TO A TOTAL FORCE OF 101 UE WITH 10 COMMAND SUPPORT AIRCRAFT BY FQ 4/68.
4. ACTIVATE THE XX AR SQ AT ELMENDORF AFB, ALASKA IN FQ 3/68.

THIS IS NOT A PROGRAM DESIGNED TO FATTEN RESCUE - ON THE CONTRARY, THE REQUIREMENT FOR EACH AIRCRAFT IS DOCUMENTED IN OUR STUDY, AND THE FORCE WILL REMAIN LEAN AND HUNGRY THROUGHOUT THE PERIOD IN RELATION TO THE JOBS TO BE DONE.

CONFIDENTIAL

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SLIDE OFF - SLIDE #16 ON

RELATING BACK TO SOME OPENING COMMENTS REGARDING AID OR ASSISTANCE VERSUS RESCUE MIGHT LEAD TO AN OPINION THAT EXPENDITURES FOR ADDITIONAL HC-130H'S CAN NOT BE JUSTIFIED ON THE BASIS OF AID TO BE RENDERED RATHER THAN RESCUES TO BE PERFORMED. THE FACTS ARE THAT THE DISTRESSED PERSONNEL MUST BE FOUND BEFORE THEY CAN BE RESCUED AND RAPID LOCATION IS OF THE UTMOST IMPORTANCE. THE CHANCES FOR SURVIVAL DECREASE RAPIDLY FOLLOWING A CRASH OR BAIL-OUT, DUE TO SHOCK, INJURY, OR EXPOSURE. THIS DICTATES THAT THE PRIMARY SEARCH AIRCRAFT HAVE SUFFICIENT SPEED, RANGE, AND ENDURANCE CAPABILITIES TO COPE WITH THE LOCATION PROBLEM SUPPLEMENTED BY A CAPABILITY TO PROVIDE ON-SCENE ASSISTANCE BY DROPPING SURVIVAL GEAR OR PARARESCUE TEAMS, IF REQUIRED. THE HC-130H FILL THE BILL FOR THIS REQUIREMENT IN THE CASE OF THE SPACE RECOVERY MISSION OR THE NORMAL LOC MISSION. IT ALSO HAS THE CAPABILITY TO RETRIEVE INDIVIDUALS OR SMALL GROUPS BY EMPLOYMENT OF THE FULTON RECOVERY SYSTEM. WE HAVE A SHORT FILM WITH US WHICH WILL SHOW YOU HOW THE FULTON SYSTEM WILL BE USED BY OUR HC-130'S.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

FILM

CONFIDENTIAL

AT FIRST EXPOSURE, THE FULTON SYSTEM DOESN'T APPEAR VERY PALATABLE TO THE AVERAGE CREW MEMBER. THIS IS UNDERSTANDABLE BECAUSE IT IS A NEW CONCEPT. THE THOUGHT OF GOING FROM A STANDSTILL TO 120 KNOTS IN A MATTER OF SECONDS ON THE END OF A LONG ROPE ISN'T EXACTLY APPEALING BUT THIS IS PRIMARILY A MATTER OF AIRCREW EDUCATION. THE FACTS ARE THAT THERE IS PRACTICALLY NO LIFTING SHOCK - THE SENSATION IS MORE ONE OF TUGGING RATHER THAN A JERK OR A JOLT. THOSE OF YOU WHO HAVE MADE A PARACHUTE JUMP MAY RELATE IT TO LESS THAN ONE-THIRD OF THE "G" FORCES ENCOUNTERED WHEN THE PARACHUTE OPENS.

AS TIME PASSES, AND SUCCESSFUL RECOVERIES ARE MADE, THE FULTON SYSTEM WILL COME INTO ITS OWN - BUT ONLY IN THE CASE OF INDIVIDUALS IN SUITABLE MENTAL AND PHYSICAL CONDITION. THIS IS THE MAJOR LIMITATION OF THE FULTON SYSTEM, BUT AIR RESPONSIBILITY DOES NOT END HERE. IF THE RECOVERY REQUIREMENT EXCEEDS THE HC-130 SYSTEM CAPABILITIES, THE OPTIONS ARE TO ATTEMPT RESCUE BY OPPORTUNE SURFACE MEANS, OR TO PROVIDE A COMPLEMENTARY SYSTEM, WHICH, IN OUR OPINION, IS EXEMPLIFIED BY THE CH-30 HELICOPTER.

CONFIDENTIAL

~~SECRET~~

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

RECEIVED


SLIDE OFF - SLIDE # 17 ON

WE ARE PARTICULARLY ENTHUSIASTIC ABOUT THE CH-3C, AS A RESULT OF THE CATEGORY III TESTS CONDUCTED FOR USAF BY OUR DETACHMENT AT PATRICK AFB. IN ALL CASES, PERFORMANCE OF THIS VTOL AIRCRAFT HAS EXCEEDED THE MANUFACTURER'S CLAIMS. THE CH-3C, WHEN MATED WITH THE HC-130H, WILL PROVIDE ARS WITH THE CAPABILITY TO RETRIEVE PERSONNEL AND HARDWARE FROM ANY SURFACE OR LOCATION IN ACCESSIBLE AIRSPACE.

OUR ULTIMATE GOAL IS AN AIR RESCUE FORCE CONSISTING OF ONE TYPE OF ORGANIC AIRCRAFT. THIS AIRCRAFT MUST POSSESS OCEAN SPANNING RANGE AND HIGH-SPEED, PLUS THE LOW-DOWNWASH HOVERING AND CONTROL QUALITIES OF THE HELICOPTER. IT MUST ALSO BE CONVERTIBLE TO A HEAVY LIFT AERIAL CRANE CONFIGURATION. THIS TYPE, NOW WITHIN THE STATE OF THE ART, WILL BE DISCUSSED LATER.

UNTIL SUCH A VEHICLE IS OPERATIONAL, LONG-RANGE
FIXED-WING AIRCRAFT, IN COMBINATION WITH HIGH-PERFORMANCE
HELICOPTERS, WILL BE REQUIRED TO ENABLE ARS TO RESCUE
PEOPLE AND RECOVER HARDWARE FROM ANYPLACE AT ANY TIME.

IN ESSENCE, THIS IS NOT A NEW CONCEPT. HU-16'S TEAMED WITH H5'S AND H-19'S TO RESCUE 9680 PEOPLE DURING THE



KOREAN WAR.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

KOREAN WAR. THE HU-16 DID THE SEARCH-LOCATION JOB AND
WHEN CONDITIONS WERE RIGHT, ALSO PERFORMED THE ACTUAL
RESCUE. 9219 TIMES IN THAT WAR, CONDITIONS WEREN'T
RIGHT - AND THE RESCUE WAS PERFORMED BY OUR FLIMSY
HELICOPTERS OF THAT DAY.

THE CONCEPT OF MATING THE HELICOPTER AND THE
FIXED-WING AIRCRAFT CONTINUED AFTER KOREA, BUT NO
SUBSTANTIAL IMPROVEMENTS WERE MADE IN EITHER VEHICLE
TO ENHANCE THE COMBAT RESCUE FORCE. THIS COMBAT AIR
RESCUE FORCE NOT ONLY DWINDLED IN SIZE, BUT NONE OF
THE MEANINGFUL DEVELOPMENTS IN VTOL AIRCRAFT WERE
INCORPORATED IN AIR RESCUE SERVICE EQUIPMENT TO KEEP
AND UPDATE THE CONCEPT. TO THE CONTRARY, BY 1961, THIS
STILL VALID CONCEPT WAS DORMANT. USAF'S COMBAT AIR RESCUE
FORCE CONSISTED OF 56 FIXED-WING AIRCRAFT - TWENTY SA-16'S AND
36 C-54'S. WE COULD SEARCH, LOCATE, RENDER AID (PARARESCUE)
AND ACTUALLY RESCUE A FEW PEOPLE, BUT ONLY WITHIN THE
LIMITED CAPABILITY OF THE SA-16. SOMETHING LIKE HAVING
BOMBERS IN SAC WITHOUT BOMBS.

FORTUNATELY, DURING THIS LULL, SOME MEANINGFUL
IMPROVEMENTS IN HELICOPTERS DID TAKE SHAPE IN THE U. S.
NAVY. TWIN-TURBINE, HIGH SPEED, ALL WEATHER S61A

CONFIDENTIAL

HELICOPTERS WERE

~~SECRET~~

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

HELICOPTERS WERE DEVELOPED AS A PRIME WEAPON SYSTEM FOR USE IN ANTI-SUBMARINE WARFARE. THIS IS SIGNIFICANT BECAUSE MANY OF THE REQUIREMENTS AND ELEMENTS OF THE ASW MISSION HAVE VALID APPLICATION IN THE COMBAT AIR RESCUE HELICOPTER MISSION. THESE ELEMENTS ARE THE ABILITY TO TRANSIT ALL-WEATHER CONDITIONS, INCREASED RANGE FOR SEARCH-PROLONGED HOVER, SELF-CONTAINED DOPPLER NAVIGATION SYSTEM, INCREASED CRUISE SPEED, AND A TRI-PHIBIOUS CAPABILITY. THESE AND OTHER IMPROVEMENTS WERE INCORPORATED IN THE SIKORSKY S-61 HELICOPTER WHICH IS THE FORERUNNER OF THE CH3C WAS PROCURED ARE THOSE FOR WHICH WE ARE RESPONSIBLE. YET, NONE OF THE 107 AIRFRAMES PROGRAMMED INTO USAF FOR AIRLIFT, AEROSPACE HARDWARE RECOVERY, AND WAR CASUALTY RECOVERY WERE PROGRAMMED INTO ARS. THEY WERE FRAGMENTED AND PROGRAMMED INTO SAC, ADC, AFSC, ADC, APCS, AND AWS. MATS, ADC, AND ATC WERE ALTERNATELY DESIGNATED AS THE "USING" COMMAND TO CONDUCT CATEGORY III OPERATIONAL SUITABILITY TESTS. AS YOU KNOW, IN MAY 1964, USAF REDIRECTED MATS AS THE CH3C "USING COMMAND." ARS TOOK OVER THE ACTUAL CAT III FLIGHT TEST PROGRAM FROM ATC. SINCE THIS PROGRAM HAS BEEN ASSIGNED AND PERFORMED BY ARS, IT'S STAYED ON, OR AHEAD

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

OF, SCHEDULE

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

OF, SCHEDULE. THIS, EVEN THOUGH ONLY ONE OF THREE DESIGNATED CH3C'S WAS ASSIGNED FOR THE GREATER PART OF THE SCHEDULED TEST SERIES, AND IT WAS LOANED TO TAC FOR TWO WEEKS TO ASSIST IN PROJECT SOUTH SHORE. 97% OF THE CAT III TEST PROGRAM IS NOW COMPLETED. WE'RE NOT LOOKING FOR A PAT ON THE BACK. WHAT IS IMPORTANT, HOWEVER, IS THAT THE AIR RESCUE SERVICE, WITH AN IN-BEING STAFF, ORIENTED TO HELICOPTER OPERATIONS, MADE ON SCHEDULE PROGRESS, WHERE OTHERS FOUNDERED. HAD ARS NOT BEEN ASSIGNED THIS TEST PROGRAM, IT'S DOUBTFUL THAT THE ON-PAD CH-3C LAUNCH RESCUE FORCE WOULD HAVE BEEN QUALIFIED AND IN-BEING IN TIME FOR THE ASTRONAUT RECOVERY MISSION DURING GT-3. TODAY, ONLY FOUR CH-3C'S ARE ASSIGNED IN ARS AT PATRICK. FOUR MORE ARE PROGRAMMED INTO OUR DETACHMENT AT GOODFELLOW. A MEAGER TOTAL OF EIGHT CH-3C'S ARE NOW PROGRAMMED. EVEN PRIOR TO THESE EVENTS, ARS VIEWED THE CH-3C'S AS THE BEST AVAILABLE VTOL AIRCRAFT TO COMPLIMENT PROGRAMMED FIXED-WING HC-130'S TO FORM AN UPDATED COMBAT RESCUE AND HARDWARE RECOVERY FORCE. EXCELLENT CATEGORY III TEST RESULTS CONFIRMED OUR

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL VIEW, AND ARS

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

VIEW, AND ARS SUBMITTED QOR'S TO BETTER ADAPT THE CH-3C FOR THE ARS MISSION TO INCLUDE AIR TO AIR REFUELING FROM THE HC-130H. ASD PRELIMINARY FLIGHT TESTS INITIALLY INDICATE AIR TO AIR REFUELING FEASIBLE, BUT NO FURTHER ACTIONS HAVE BEEN TAKEN TO DATE. WE'VE PROVEN THAT THE CH-3C HAS A PRACTICAL 1000 MILE RANGE USING INTERNAL AUXILIARY TANK, TAKING OFF AND LANDING VERTICALLY. WE BELIEVE RUNNING TAKE-OFFS WOULD INCREASE THE RANGE TO ABOUT 1500 NM. THIS HAS NOT BEEN TESTED AND ISN'T IN THE CAT III TEST SERIES YET. THE ABILITY TO AIR-TO-AIR REFUEL WOULD GIVE CH3C UNPARALLELED RESCUE CAPABILITY IN THE FORM OF OCEAN SPANNING LOW ALL WEATHER VTOL CAPABILITY WITHOUT DEPENDENCE ON OR DEPLETION OF CRITICAL AIRLIFT FORCES. RESCUE WHERE IT'S NEEDED, WHEN NEEDED, WITHOUT COSTLY TEAR-DOWN, OR REASSEMBLY. THE EXPENDITURES IN PRECIOUS TIME AND ADDITIONAL HARDWARE TO MAKE AIR-TRANSPORTABILITY WORK, CAN ALSO BE SAVED BY THIS RANGE EXTENSION METHOD.

WITH AIR-TO-AIR REFUELING A PRACTICAL REALITY, RECOVERY OF INJURED OR NON-AMBULATORY ASTRONAUTS ALSO

~~SECRET~~ CONFIDENTIAL

BECOMES A

THIS
PAGE
IS
UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

BECOMES A PRACTICAL REALITY AT GREATER RANGES. THE FIRST OF 27 PROJECT APOLLO MISSIONS IS PROGRAMMED FOR THE FIRST QUARTER OF CALENDAR YEAR 1966. THE MANNED OR "500" SERIES MISSIONS BEGIN IN THE THIRD QUARTER OF CALENDAR 1967. WE KNOW THAT 60 UE HC-130H'S WILL BE IN THE ARS INVENTORY BY THIS TIME. UNLESS THE "HH"-3C, CAPABLE OF BEING AERIAL REFUELED IS ALSO IN THE INVENTORY, OUR RECOVERY FORCE IS LIMITED TO COMPLETE DEPENDENCE UPON THE FULTON RECOVERY SYSTEM. WE KNOW THAT SAFETY OF THE ASTRONAUTS, FROM LAUNCH TO RECOVERY IS OF PARAMOUNT CONCERN IN ALL U. S. MANNED SPACE MISSIONS. WE HAVE GOOD REASON TO BELIEVE THAT REDUNDANCE IN RECOVERY SYSTEMS WILL CONTINUE TO BE REQUIRED BY NASA. (COMPLETE RELIANCE UPON THE MAN-RATED FULTON RECOVERY SYSTEM IS ALREADY BEING QUESTIONED BY NASA RECOVERY OFFICIALS. THEIR PHYSICAL AND MENTAL CONDITION OF THE ASTRONAUTS MAY ENTIRELY RULE OUT EMPLOYMENT OF THE SYSTEM FOR SPACE RECOVERY MISSIONS, OR AT BEST, IT'S USE WILL BECOME A LAST DITCH METHOD.) EIGHTEEN HOUR ACCESS TIME, AND THE ECONOMICS OF EMPLOYING NUMEROUS U. S. NAVY SHIPS CF-THE-LINE AS HELICOPTER CARRIERS MITIGATE AGAINST THEIR CONTINUED USE. A GLOBAL

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

AIR RECOVERY

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

AIR RECOVERY MIXED FORCE IS REQUIRED NOW AND THROUGHOUT THE 1975 TIME PERIOD, AND THE MOST URGENT REQUIREMENT IS FOR AN ARS FORCE OF CH3C'S TO OPERATE IN CONJUNCTION WITH THE HC-130H FORCE.

SLIDE OFF - SLIDE OR FLIP

THESE ARE SHOWN HERE. WITH THIS FORCE WE HAVE REAL RESCUE COVERAGE AND A CAPABILITY TO GO TO WAR.

LBR - WHEN THE CH3C'S ARE IN THE INVENTORY, WE WILL REPLACE LIMITED PURPOSE LOCAL BASE RESCUE HELICOPTERS ON THOSE BASES WHERE WE'VE PROGRAMMED THE CH3C. THIS IS POSSIBLE BECAUSE THE CH3C IS ALSO AN EXCELLENT FIRE-SUPPRESSION HELICOPTER, ABLE TO BE SCRAMBLED IN 3 MINUTES OR LESS. WE ARE OF THE OPINION THAT THE CONCEPT OF LOCAL BASE RESCUE IS VALID AT ALL AIR FORCE BASES WHERE FLYING IS CONDUCTED. BUT WE ALSO BELIEVE IT A LUXURY WE CAN'T AFFORD AT ALL BASES. THE CONCEPT IS VALID, AND WE RECOMMEND IT BE CONTINUED THROUGHOUT THE TIME PERIOD BUT ONLY AT AIR TRAINING COMMAND BASES, TACTICAL TRAINING BASES, AND AT ALL GUNNERY RANGES. TODAY, THERE IS NO PROGRAM TO UPDATE THESE AIRCRAFT ALTHOUGH THE FIRST AIRCRAFT RECEIVED IN 1958 HAVE EXCEEDED THESE FIRST LINE LIFE. NUMBERS OF LBR DETACHMENTS MAY EVEN BE REDUCED

~~SECRET~~ CONFIDENTIAL

BECAUSE WE

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

BECAUSE WE BELIEVE THE LBR REQUIREMENT IS JUSTIFIED ONLY UNDER HIGH RISK CONDITIONS. THE REPLACEMENT LBR HELICOPTER MUST BE A TWIN-TURBINE MACHINE, WITH IFR CAPABILITY. WE BELIEVE A REPLACEMENT HELICOPTER FOR THIS MISSION CAN BE PROCURED FOR LESS THAN HALF THE COST OF THE PRESENT MACHINE. A SMALL OFF-THE-SHELF HELICOPTER COULD MEET THIS REQUIREMENT. OUR QOR FOR A REPLACEMENT TWIN TURBINE LBR HELICOPTER IS INCLOSED IN OUR STUDY.

A LIMITED NUMBER OF HEAVY-LIFT HELICOPTERS EXEMPLIFIED BY THE U. S. ARMY CH-47 CHINOOK OR THE U. S. MARINE CH-53A ^{may be} ~~ARE~~ NEEDED TO ASSURE RECOVERY OF HEAVY AEROSPACE HARDWARE. THE APOLLO SPACECRAFT WEIGHS 10,000 LBS WHICH IS 4000 LBS BEYOND THE EXTERNAL SLING-LOAD CAPABILITY OF THE CH3C.

THE CH3C IS FAR MORE ECONOMICAL TO OPERATE AND MEETS 90% OF OUR MISSION REQUIREMENTS. FOR THIS REASON ONLY A LIMITED NUMBER OF HEAVY LIFT HELICOPTERS WILL BE REQUIRED FOR APOLLO CAPSULE RECOVERY IN THE PLANNED LANDING AREAS. IT APPEARS REASONABLE TO ASSUME THAT ADDITIONAL HEAVY LIFT MISSIONS WILL BE REQUIRED IN FURTHER SPACE RESEARCH AND DEVELOPMENT PROGRAMS.

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ **CONFIDENTIAL**
SECTION VI - SUPPORTING SYSTEMS

1. ACQUISITION OF AIRCRAFT ALONE WILL NOT PROVIDE A COMPLETE RESCUE SYSTEM BUT MUST BE SUPPORTED BY OTHER ELEMENTS. ANY SYSTEMS IN SUPPORT OF THE RESCUE/RECOVERY MISSION REGARDLESS OF SPECIFIC TIME FRAMES MUST LEND THEMSELVES TO COMPLETE FLEXIBILITY. THEY MUST BE CAPABLE OF EXPANDING AND ADAPTING TO CHANGING CONCEPTS OR UPDATING OF EQUIPMENT BROUGHT ABOUT BY STATE-OF-THE-ART IMPROVEMENTS.
2. WITHIN THE MATERIEL AREA THE VAST SYSTEM NECESSARY TO SUPPORT WORLD-WIDE DEPLOYMENT AND DISPERSAL IS ALREADY IN-BEING AND LENDS ITSELF QUITE ADEQUATELY TO SUPPORTING OUR MISSION. AFLC'S YEARS OF EXPERIENCE IN SUPPORTING TACTICAL AIR COMMAND, COMPOSITE AIR STRIKE FORCES, MATS AIRLIFT EXERCISES AND SAC REFLEX ACTIONS HAVE REFINED AND POLISHED THEIR SUPPORTING SYSTEMS. GIVEN SUFFICIENT PRIORITY AND PRECEDENCE RATINGS THIS SYSTEM SHOULD PROVE EFFECTIVE IN SUPPORTING ARS GLOBAL REQUIREMENTS. DURING DEPLOYMENT THE USE OF MISSION SUPPORT KITS (MSK'S) AND ACCOMPANYING MAINTENANCE PERSONNEL WILL PERMIT LIMITED MAINTENANCE IN THE FIELD. ALL SCHEDULED MAINTENANCE AND PHASE INSPECTIONS WILL BE ACCOMPLISHED AT HOME STATION. WHILE A CONSOLIDATED MAINTENANCE SYSTEM

~~SECRET~~ **CONFIDENTIAL**

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED


THIS PAGE IS UNCLASSIFIED

 CONFIDENTIAL

IS EFFECTIVE FOR GENERAL MAINTENANCE IT DOES NOT LEND ITSELF TO ADEQUATELY SUPPORTING THE AIR RESCUE SERVICE IN THOSE AVIONICS AREAS WHERE WE OPERATE SYSTEMS PECULIAR TO US ALONE. ALTHOUGH THIS PROBLEM IS NOT UNIQUE AND MAY SEEM EASILY SOLVED IT CANNOT BE SOLVED UNLESS SPECIFIC AUTHORITY IS INCLUDED IN APPROPRIATE MANNING AND EQUIPPING DOCUMENTS. WE HAVE REQUESTED SUCH AUTHORITY WITHIN OUR STUDY.]

3. UPDATING OF PRESENT EQUIPMENT TO EXPLOIT ITS FULL POTENTIAL, ADAPTATION AND USE OF EXISTING SIGNALLING DEVICES AND A GENUINE AWARENESS OF A NEED FOR NEW IDEAS IS NECESSARY TO IMPROVE RESCUE EFFECTIVENESS. ARS HAS TAKEN ACTION BY SUBMITTING QUALITATIVE OPERATIONAL REQUIREMENTS AND CLASS V MODIFICATION REQUESTS TO IMPROVE OUR CAPABILITIES. FOR EXAMPLE, WE MENTIONED A QOR FOR AN AIR-TO-AIR REFUELING SYSTEM FOR THE CH3C HELICOPTER WHICH WAS SUBMITTED ON 7 AUGUST 1964.

WE ALSO ESTABLISHED A QOR FOR AN AERIAL RETRIEVAL SYSTEM FOR THE CH3C HELICOPTER. ON 17 APRIL 1964 TO PERMIT AERIAL RECOVERY OF HIGH VALUE HARDWARE SUCH AS ROCKET BOOSTERS AND CAMERA CASSETTES ON THE NATIONAL MISSILE RANGES. IT WILL PREVENT LOSS OR DAMAGE TO EQUIPMENT DUE TO HARD IMPACT LANDINGS OR WATER IMMERSION.

 CONFIDENTIAL

TO EFFECTIVELY

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

TO EFFECTIVELY EMPLOY THE CH3C ON LONG RANGE MISSIONS AND TO INSURE ACCURATE NAVIGATION OVER REMOTE LAND MASSES AND AT SEA, AN ADEQUATE LONG RANGE NAVIGATION SYSTEM IS REQUIRED. CONSEQUENTLY, A CLASS V MODIFICATION FOR INSTALLATION OF LORAN "C" AN/ARN 78 RADIO NAVIGATION EQUIPMENT WAS SUBMITTED ON 4 JANUARY 1965.

IN THE AREA OF LOCATION DEVICES WE SUBMITTED A QOR FOR A SOUND FIXING AND RANGING (SOFAR) OCEAN CRASH LOCATOR SYSTEM ON 13 JAN 1964. THIS LOCATING SYSTEM IS PRESENTLY UTILIZED IN THE MISSILE IMPACT LOCATION SYSTEM (MILS) TO PINPOINT MISSILE IMPACT AREAS ON THE NATIONAL MISSILE RANGES. DESPITE THE FACT THAT SOFAR CHARGES ARE CARRIED ABOARD USAF, NAVY, AND FAA AIRCRAFT OPERATING FROM HAWAII, THE POTENTIAL OF THIS LOCATING DEVICE HAS NOT BEEN EXPLOITED OR FULLY EXAMINED.

4. ADDITIONAL QUALITATIVE OPERATIONAL REQUIREMENTS AND REQUESTS FOR MODIFICATIONS TO EXISTING EQUIPMENT ARE CONTAINED WITHIN THE STUDY. ALL ARE THOROUGHLY JUSTIFIED ON THE BASIS OF INCREASED MISSION EFFECTIVENESS.

SECTION VII - BRIEFING PAPER

DURING THE SUCCESSFUL GEMINI MISSION ON 23 MARCH, AIR RESCUE SERVICE PROVIDED RESCUE COVERAGE FROM LAUNCH

CONFIDENTIAL

TO FINAL RECOVERY

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

TO FINAL RECOVERY, WITH ONE EXCEPTION. WE HAD FOUR CH3C'S COVERING THE PAD AT CAPE KENNEDY IN CASE OF PAD ABORT, OR EJECTION OF THE ASTRONAUTS BELOW 13,500 FEET. BETWEEN FLORIDA AND AFRICA, OUR HC-54'S AND HC-97'S COVERED THE LAUNCH ABORT AREA. IN SOUTH AMERICA, AFRICA, THE INDIAN OCEAN, AUSTRALIA, AND THE SOUTH PACIFIC, RESCUE AIRCRAFT STOOD BY FOR A CONTINGENCY LANDING WITH PARARESCUE PERSONNEL ABOARD TO SECURE THE COMMAND MODULE AND TO PROVIDE ASSISTANCE AND MEDICAL AID, IF NECESSARY. IN THE PLANNED LANDING AREA, AN ADDITIONAL FOUR AIRCRAFT WERE AVAILABLE IN CASE OF OVERSHOOT OR UNDERSHOOT FOR A TOTAL OF 37 FIXED-WING AND 4 HELICOPTERS INVOLVED.

ONE OF OUR HC-54'S FOUND THE SPACECRAFT AND PARACHUTED PARARESCUE PERSONNEL TO PROVIDE CAPSULE FLOTATION AND MEDICAL AID. IF WE'D HAD HEAVY LIFT HELICOPTERS AT GRAND TURK ISLAND, THE CARRIER "INTREPID" COULD HAVE BEEN ENGAGED IN ITS NORMAL FUNCTIONS AND ARS COULD HAVE RETRIEVED THE ASTRONAUTS AND THE CAPSULE.

BUT THIS IS NOT THE EXCEPTION OR GAP IN COVERAGE THAT WAS SO OBVIOUS. ALL FACETS OF THE MISSION WERE COVERED EXCEPT FOR SPACE ITSELF.

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IF ONE OF THE MAJOR SUB-SYSTEMS OF THE GEMINI CAPSULE HAD FAILED, THUS PREVENTING RE-ENTRY, THE NATION WOULD HAVE HAD A STEP BY STEP TELEVISION AND RADIO DESCRIPTION OF HOW THE UNINJURED AND UNHARMED ASTRONAUTS WERE DYING WITHOUT HOPE OF RESCUE. WHEN THE PUBLIC REALIZED THAT NO ACTION WHATSOEVER COULD BE TAKEN TO ATTEMPT RESCUE, THE PRESSURES ON THE ADMINISTRATION WOULD, AT A MINIMUM, RESULT IN A REAPPRAISAL OF SPACE GOALS: OR AN INDEFINITE DELAY, REORGANIZATION, OR POSSIBLY CANCELLATION, OF PLANNED SPACE PROGRAMS. IN EARLY MERCURY SHOTS, A FAILURE MIGHT HAVE BEEN ACCEPTED. BUT AS OF TODAY, A FAILURE WHICH WOULD RESULT IN MAROONING U. S. ASTRONAUTS IN SPACE, WOULD REPRESENT A NATIONAL DELINQUENCY WHICH COULD PRODUCE UNPLEASANT REACTION, NOT ONLY BY THE U. S. PUBLIC, BUT BY OUR ALLIES AND OTHER UNCOMMITTED COUNTRIES WHO MIGHT LOOK TO THE RUSSIANS FOR TECHNOLOGICAL LEADERSHIP AS A RESULT OF SUCH A BLATANT FAILURE. SUCH AN EVENT COULD MARK A TURNING POINT IN HISTORY, OF UNFORESEEABLE DURATION AND IMPACT.

WE, AS A NATION, MUST ASK OURSELVES THE QUESTION -
"DO WE REALLY BELIEVE THAT OUR NATIONAL ETHICS, TRADITIONS,

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

AND HUMANITARIAN VALUES END AT THE EDGE OF SPACE?" IF THE ANSWER IS YES, WE HAVE NO BUSINESS IN SPACE AT ALL. IF THE ANSWER IS "NO, THEN THESE VALUES REMAIN PART AND PARCEL OF THE AMERICAN SYSTEM, AND WE'D BETTER GET ON WITH THE JOB TO DEFINE AND BUILD A SPACE RESCUE SYSTEM. WHEN THIS DONE, WE CAN PRACTICE THESE BELIEFS, INSTEAD OF FINDING OURSELVES IN THE SAME FIX WE WERE IN WHEN THE KOREAN WAR AND THE VIETNAM STRUGGLE STARTED, THAT IS, WITHOUT A RESCUE CAPABILITY ADEQUATE TO MEET THE REQUIREMENT.

FULLY REALIZING THAT WHAT HAS BEEN SAID IS MORE OR LESS OF AN EMOTIONAL APPROACH TO A PROBLEM, WHICH DOESN'T HAVE MANY OF THE QUALITIES NECESSARY TO PENETRATE THE COST EFFECTIVENESS BARRIER, THERE ARE OTHER PRACTICAL ASPECTS OF A SPACE RESCUE SYSTEM WHICH CAN'T BE OVERLOOKED.

FIRST OF THESE, WE BELIEVE, IS THE REQUIREMENT TO PHYSICALLY EXAMINE THE SPACECRAFT IN SPACE IF AN EMERGENCY OR FAILURE OCCURS RESULTING IN DISASTER. THE REASONS FOR FAILURE MUST BE PINPOINTED SO THAT SUBSEQUENT MANNED PROGRAMS ARE NOT JEOPARDIZED. IN OUR OWN AVIATION REALM, WE SPEND THOUSANDS OF MANHOURS PIECING TOGETHER CRASHED

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

AIRCRAFT FOR IDENTICAL REASONS. THE ONLY SURE WAY TO FIND OUT WHAT HAPPENED IS TO GAIN DIRECT ACCESS TO WHATEVER IS LEFT - CONJECTURE CAN'T PROVIDE A POSITIVE FIX.

SECOND, A RAPID RESPONSE FOR RESCUE MAY ALSO PROVIDE A RAPID RESPONSE FOR REPAIR. THIS COULD MEAN REPLACEMENT OF A BLACK BOX OR THE REPAIR OF AN OXYGEN LEAK. MANY DIFFICULTIES COULD OCCUR BEYOND THE CAPABILITY OF THE PRIMARY CREW TO REPAIR, BUT WITHIN THE CAPABILITIES OF AN AUXILIARY CREW EQUIPPED WITH REPLACEMENT COMPONENTS FOR MALFUNCTIONING SYB-SYSTEMS. REPAIR IN THIS SENSE IS A MEANS OF RESCUE SINCE REPAIR WOULD PERMIT THE CREW TO COMPLETE THE MISSION AND BE RECOVERED IN THE NORMAL MANNER.

THIRD, EQUIPPING EACH SPACE VEHICLE WITH AN ESCAPE MODULE WOULD BE PROHIBITIVELY COSTLY IN TERMS OF THE ADDITIONAL BOOST REQUIRED FOR EACH SPACECRAFT AND THE REDUNDANCY REQUIRED. FURTHER, ESCAPE AND REENTRY BY AUXILIARY MODULE WOULD MERELY REMOVE THE CREW FROM ONE HOSTILE ENVIRONMENT INTO ANOTHER - THAT IS, INTO THE OCEAN, JUNGLES, OR MOUNTAINS OR, IN THE CASE OF A POLAR ORBIT, INTO THE ARCTIC, ANTARCTIC, OR ASIAN COMMUNIST LAND MASSES.

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

FOURTH, THE CAPABILITY TO INTERCEPT, IDENTIFY, OR GAIN ACCESS TO SPACE VEHICLES, COOPERATIVE, PASSIVE, OR UNCOOPERATIVE, WILL BE A VALID MILITARY REQUIREMENT IN THE SPACE AGE. THE TECHNIQUES DEVELOPED AND EMPLOYED FOR THE SPACE RESCUE ROLE MAY BE OF FAR GREATER IMPORTANCE THAN THE PURE RESCUE FUNCTION. DEVELOPING THIS CAPABILITY WITHIN THE CONNOTATION OF HUMANITARIAN RESCUE APPEARS TO BE A MOST ACCEPTABLE METHOD IN TERMS OF IMPACT ON NATIONAL AND WORLD OPINION.

ONCE AGAIN RESCUE IS TRAILING BEHIND SYSTEM DEVELOPMENT. APPARENTLY THIS IS BASED ON EXTREME CONFIDENCE IN QUALITY CONTROL OF EACH ELEMENT OF THE MANNED SPACE SYSTEMS. THIS LEADS TO THE UNSPOKEN BELIEF THAT IT IS VIRTUALLY IMPOSSIBLE FOR A MALFUNCTION TO OCCUR WHICH COULD MAROON MAN IN SPACE. THIS SEEMS TO BE A RATHER CURIOUS VIEWPOINT WHEN WE CONSIDER THAT THE SPACE INDUSTRY IS ESSENTIALLY AN ARM OF THE AVIATION INDUSTRY, WHOSE PRODUCT FAILURES KEEP AIR RESCUE SERVICE IN BUSINESS.

IT MAY BE TOO LATE RIGHT NOW TO DEVELOP A SYSTEM IN TIME TO PREVENT THE LOSS OF MEN IN SPACE. WE BELIEVE THAT IMMEDIATE ACTIONS MUST BE TAKEN TO DEFINE AND PRODUCE A

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

RESCUE SYSTEM WHICH WILL MEET THE RESCUE REQUIREMENTS OF THE SPACE AGE. TO THIS END, WE SEEK YOUR ACTIVE ASSISTANCE IN GETTING THIS PROGRAM OFF THE GROUND.

SECTION VIII

WE'VE DISCUSSED SYSTEMS AND SUB-SYSTEMS, NOW LET'S TALK A LITTLE BIT ABOUT ORGANIZATION AND MANPOWER. WITHIN THE PAST TWO MONTHS, THE MATS STAFF WAS BRIEFED ON THE PROPOSED REORGANIZATION OF AIR RESCUE SERVICE SO WE'LL MERELY HIT THE HIGHLIGHTS OF THE BRIEFING. ESSENTIALLY, THE PROPOSAL IS TO ESTABLISH ^{Three} ~~THESE~~ RESCUE WINGS SUBORDINATE TO ARS HEADQUARTERS TO HANDLE

SLIDE - 3 WING ORGANIZATION & JSARC'S

DAY-TO-DAY OPERATIONS. OVERALL PLANNING AND OPERATIONAL CONTROL OF THE RESCUE FORCES WILL REMAIN WITH THE HEADQUARTERS THUS PERMITTING CENTRALIZED CONTROL AND DECENTRALIZED EXECUTION. WE BELIEVE THIS ORGANIZATIONAL STRUCTURE WILL PROVIDE THE FLEXIBILITY NECESSARY TO MEET, OR ADAPT TO, EXISTING AND CHANGING USAF AND DOD RESCUE AND RECOVERY REQUIREMENTS FOR THE NEXT DECADE. WE HOPE HERE THE THREE WING STRUCTURES IN BEING BY THE THIRD QUARTER

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

OF FISCAL 66.

~~SECRET~~ CONFIDENTIAL
SLIDE - MANPOWER

THE MANPOWER REQUIRED TO SUPERVISE, MAINTAIN, AND CREW THE AIRCRAFT WHICH WE HAVE DISCUSSED TODAY ARE REFLECTED ON THE NEXT CHART. FROM OUR PRESENT AUTHORIZATIONS FOR 3458 SPACES, THE FORCE BUILDS UP AS THE AIRCRAFT ARE PHASED INTO THE SYSTEM, UNTIL ALL AIRCRAFT ARE ON HAND IN THE FOURTH QUARTER OF FISCAL 68. THIS INVOLVES A GRADUAL BUILDUP OF MANPOWER RESOURCES FOR AN ADDITIVE REQUIREMENT OF 2436 AT THE COMPLETION OF THE FORCE BUILDUP.

SECTION IX - ADVANCED CONCEPTS

THE PERIOD WE'VE BEEN EMPHASIZING IS REALLY WITHIN THE NEXT THREE YEARS BUT WE MUST LOOK BEYOND THAT TIME SINCE CONCURRENT DEVELOPMENT OF AIRCRAFT TO KEEP PACE WITH OUR USER'S REQUIREMENTS IS A MUST. PAST FRAGMENTED EFFORTS TO GET AN OPERATIONAL VTOL OR V/STOL RESCUE/ RECOVERY AIRCRAFT OF PRACTICAL VALUE INTO THE INVENTORY HAVE BEEN EMBROILED IN MORE CONFUSED EFFORT AND PARTIAL RESULTS THAN CAN BE ENUMERATED. DOLLARS HAVE BEEN EXPENDED ON EVERYTHING FROM GEMS TO JETS. THAT IS FROM GROUND EFFECT MACHINES TO LIFT ENGINE TYPE V/STOL AIRCRAFT .

CONFIDENTIAL
~~SECRET~~

WE CERTAINLY CAN'T

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

WE CERTAINLY CAN'T GO INTO GREAT DETAIL IN STUDYING OR DISCUSSING SUCH A BROAD SPECTRUM OF V/STOL POSSIBILITIES AND MUST THEREFORE WEED OUT THE LESS PROMISING CONFIGURATION AND CONCENTRATE MORE THOROUGHLY ON THOSE WHICH GIVE REAL PROMISE OF FUTURE APPLICATION IN THE GLOBAL AIR RECOVERY FORCE. ONE CENTRAL CRITERIA¹ IS SET. THAT IS THE AIRCRAFT MUST BE ABLE TO RESCUE PEOPLE AND BE ADAPTABLE TO THE RECOVERY OF AEROSPACE HARDWARE FROM ANY PLACE AT ANY TIME. THIS MEANS FROM UNPREPARED AREAS, AND IT MEANS LOW, 15 PSF OR LESS, DOWNWASH VELOCITIES. WE VISUALIZE ONE TYPE VEHICLE, CONVERTIBLE AND EASILY ADAPTABLE TO OUR COMPLETE RECOVERY MISSION. THE RESEARCH WORK THAT HAS BEEN DONE BY THE MILITARY AND INDUSTRY OVER THE PAST SEVERAL YEARS IS PROVIDING MANY MORE TECHNICAL AND ECONOMIC OPTIONS IN V/STOL THAN HERETOFORE, AND CONSEQUENTLY, A GREATER DIVERSITY OF TASKS CAN BE FORESEEN FOR V/STOL AIRCRAFT FOR THE FORESEEABLE FUTURE. WE EMPHASIZE THAT THIS GROWING DIVERSITY OF OPTIONS AND TASKS MAKES IT MUCH MORE URGENT THAN EVER, THAT AIRCRAFT SYSTEMS CHARACTERISTICS BE MATCHED PRECISELY AND CAREFULLY TO OPERATIONAL REQUIREMENTS. WE BELIEVE WE CAN CLEARLY DEFINE OUR REQUIREMENTS.

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

ADVANCED RESCUE

~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

ADVANCED RESCUE AIRCRAFT CONCEPTS

THE GROUND RULES WE'VE ADOPTED IN OUR ADVANCED CONCEPTS IS THAT AN INCREASE IN CAPABILITY MUST ENTAIL NO INCREASE IN COMPLEXITY THAT WOULD AFFECT COST, PRODUCIBILITY, MAINTENANCE, OR RELIABILITY OF THE SYSTEM. RECOMMENDED TO MEET OUR FORESEEABLE RESCUE/RECOVERY MISSION REQUIREMENTS.

WE MIGHT FIRST TAKE A LOOK AT THE SPECTRUM OF V/STOL RELATED TO SPEED SHOWN IN FIGURE #1. HERE WE HAVE ARRANGED V/STOL TYPES FROM LEFT TO RIGHT IN INCREASING ORDER OF SPEED. THE PURE ROTOR TYPES ARE AT THE LOW SPEED END, THE PROPELLER LIFT TYPES FALL IN THE MIDDLE, AND THE JET-LIFT TYPES OCCUR, AS WOULD BE EXPECTED, AT THE HIGH SPEED END. THE RESULT, HOWEVER, IS NOT AS SIMPLE AS IT MAY APPEAR. FOR EXAMPLE, IT IS POSSIBLE TO EXTEND THE CAPABILITY OF THE ROTOR TYPES BEYOND THE RANGE SHOWN, BY STOPPING THE ROTOR. YOU WILL ALSO NOTE THAT THE SPEED OF THE ROTOR TYPES CAN BE FURTHER AND GREATLY INCREASED IN AN AIRCRAFT WHICH PROVIDES FOR STOWING OR RETRACTING A STOPPED ROTOR. IN THIS CONCEPT, BOTH THE ROTOR-PROPULSION SYSTEM AND HIGH-SPEED CONVENTIONAL FLIGHT ARE ACHIEVED FROM JETS DIVERTED

~~SECRET~~

CONFIDENTIAL

THIS
PAGE
IS
UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

 CONFIDENTIAL

AS NECESSARY. FIGURE #2 SHOWS AN EXAMPLE OF THE SYSTEM IN A .9 MACH HOT-CYCLE STOWED ROTOR. THIS AIRCRAFT INCORPORATES A ROTOR SMALL AND SIMPLE ENOUGH TO BE RETRACTED WITHIN THE FUSELAGE. THE GROSS WEIGHT FOR THE MACHINE AND THE WEIGHT EMPTY, ARE APPROXIMATELY THE SAME AS THOSE OF THE F-86 (17,500 LBS AND 11,000 LBS). THIS APPARENTLY IMPOSSIBLE FEAT IS ENTIRELY PRACTICAL SINCE THE ENTIRE PROPULSION SYSTEM AND ROTOR IN THIS AIRCRAFT WEIGH, TOGETHER, SOMEWHAT LESS THAN DID THE EARLY VENTAGE ENGINE OF THE F-86. ANALYSIS OF THIS SIMPLE SYSTEM, WHICH ELIMINATES COMPLEX TRANSMISSIONS, POWER SHAFTING, AND GEAR TRAINS, WAS FIRST MADE SOME 15 YEARS AGO. AT THAT TIME,, SATISFACTORY HIGH TEMPERATURE STRUCTURAL MATERIALS WERE NOT AVAILABLE, BUT SUCH IS NOT THE CASE TODAY. THE HUGHES OV-9A PURE HELICOPTER, EMPLOYING THE HOT-CYCLE PRINCIPLE, IS FLYING TODAY.

THE QUESTION MAY BE ASKED: WHY EMPLOY, OR CONSIDER, A ROTOR? INSTALLED THRUST-TO-WEIGHT RATIOS OF LIFT-ENGINES, EXCLUSIVE OF THE CRUISE PROPULSIVE SYSTEM, COULD BE TWICE THAT OF THE STOWED-ROTOR SYSTEM. THE ANSWER IS

 CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

SIMPLY THAT, THE TACTICAL RESCUE MISSION (WHETHER FOR ASTRONAUT OR DOWNED COMBAT AIRCREW) REQUIRES EXTENDED HOVER, AND FLIGHT AND MANEUVER AT HELICOPTER SPEEDS. OF KEY SIGNIFICANCE, IS THAT THE MACHINE MUST OPERATE TO AND FROM COMPLETELY UNPREPARED SITES. NEITHER HIGH DOWN-WASH VELOCITIES NOR EXCESSIVE HOVER FUEL FLOW CAN BE TOLERATED. THE ROTOR SYSTEM GENERATES LOW DOWNWASH VELOCITIES AND PERMITS EXTENDED FLIGHT AT EVERY LOW SPEEDS WITHOUT APPRECIABLE INCREASE IN MISSION FUEL LOAD. RESULT? EXCELLENT OPERATIONAL FLEXIBILITY. WE BELIEVE THE CONCEPT HAS VERY PROMISING APPLICATION AS A HIGH-PERFORMANCE RESCUE-RETRIEVAL VEHICLE. IT COULD BE AIR-TO-AIR REFUELED FROM KC-135'S OR KC-130'S IN THE SAME MANNER AS TACTICAL FIGHTERS. IT COULD ACCOMPANY AIR STRIKES OR STAND STRIP ALERT AT ADVANCED UNPREPARED SITES, PERFORMING IMMEDIATE RESCUE OF DOWNED TACTICAL FIGHTER-BOMBER CREWS. STRIKES IN NORTH VIETNAM, EXEMPLIFY ITS APPLICATION. IT WOULD DENY THE ENEMY A PRIME SOURCE OF INTELLIGENCE DATA. ITS COVERT USE IS OBVIOUS.

REFERRING AGAIN TO FIGURE #2, WE MUST ELIMINATE THE TILT-WING AND/OR TILT-PROP ON AT LEAST TWO COUNTS. FIRST,

~~SECRET~~

CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

THAT NEITHER BY THEIR VERY NATURE, WILL POSSESS THE OPERATIONAL FLEXIBILITY DEMANDED IN OUR MISSION WHICH REQUIRES THAT WE BE ABLE TO PERFORM THE RESCUE FROM ANY PLACE AT ANY TIME. THEY CANNOT OPERATE EFFECTIVELY NOR SAFELY FROM UNPREPARED SITES. SECONDLY, THEY ARE HIGHLY COMPLEX, AND BY THEIR VERY NATURE, WILL REMAIN SO. TILT-WINGS SUCH AS THE SC-142, HAVE ELEVEN TRANSMISSIONS AND ASSOCIATED DRIVE SHAFTING, SO THEY ARE COMPLETELY DEPENDENT UPON AUTOMATIC STABILIZATION DEVICES. THE RESULT? THE MAINTENANCE MAN-HOUR PER FLYING HOUR (MMHFH) RATIO IS EXCESSIVE. THE SC142 IS PREDICTED AT 86 MMHFH VERSUS 10.7 MMHFH FOR THE CH3C. ALTHOUGH DIRECT LINE TURBO FANS AND TURBO JETS ARE LESS COMPLEX, THEY PAY SEVERE PENALTIES IN FUEL-FLOW WHICH REDUCES HOVER TIME. THE DOWN-WASH PROBLEM IS NOT OVERCOME. IN FACT, SOME NEW PROBLEMS ARE INTRODUCED WITH THESE TYPES. BRIEFLY, ENOUGH HEAT (425°F) IS GENERATED TO MELT ASPHALT, COUPLED WITH UNACCEPTABLY HIGH DOWN-WASH VELOCITIES.

A SECOND PROMISING APPLICATION OF THE HOT-CYCLE IS THE ROTOR-WING SHOWN IN FIGURE #3. THE ROTOR-WING IS A NEW CONCEPT FOR A HIGH-SPEED VTOL AIRCRAFT THAT HAS THE

THIS
PAGE
IS
UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CONFIDENTIAL~~ CONFIDENTIAL

HOVERING EFFICIENCY WITH LOW DOWN-WASH VELOCITIES OF A HELICOPTER, COUPLED WITH AN OUTSTANDING PAYLOAD-CARRYING ABILITY. THE ROTOR-WING IS A UNIQUE, DUAL-PURPOSE LIFTING DEVICE, THAT IS BASICALLY A HOT CYCLE, HIGH SOLIDITY ROTOR WITH AN UNUSUALLY LARGE HUB. IN ONE ELEMENT, IT COMBINES A TIP-JET POWERED ROTOR FOR VERTICAL AND LOW-SPEED FLIGHT THAT STOPS DURING FLIGHT TO BECOME A LOW-ASPECT RATIO FIXED WING FOR CRUISE. BY STOPPING THE ROTOR IN FORWARD FLIGHT, THE SPEED LIMITATIONS OF THE HELICOPTER ROTOR ARE REMOVED.

THE HOT-CYCLE PROPULSION SYSTEM THAT POWERS THIS VEHICLE IS CHARACTERIZED BY LIGHT WEIGHT AND SIMPLICITY FACTORS THAT PROMISE A PAYLOAD CAPABILITY FOR THE ROTOR-WING AIRCRAFT, MARKEDLY SUPERIOR TO OTHER HIGH-SPEED VTOL AIRCRAFT.

CONCLUSIONS:

FIRST, THE HOT-CYCLE JET PROPULSION ROTOR-WING SYSTEM INCREASES SUBSTANTIALLY THE RESCUE MISSION CAPABILITY. IT MEETS OUR CRITERIA WHICH DEMANDS NO INCREASE IN COMPLEXITY THAT WOULD AFFECT COST, PRODUCIBILITY, MAINTENANCE, OR RELIABILITY.

~~CONFIDENTIAL~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

SECRET CONFIDENTIAL

SECOND, ALL ARS V/STOL'S MUST BE CAPABLE OF BEING AIR-TO-AIR REFUELED FROM STANDARD USAF TANKERS.

RECOMMENDATIONS:

FIRST, THAT SOR 210 BE AMENDED TO INCLUDE THE CRITERIA ESTABLISHED BY THE OPERATING COMMAND, I.E., MATS/ARS.

SECOND, THAT MATS REQUEST A FULL STATUS BRIEFING OF THE MACHINE NOW BEING CONSIDERED TO MEET THE ARS V/STOL REQUIREMENT.

THIRD, THAT A COMPUTER SIMULATOR ANALYSIS BE CONDUCTED PROMPTLY, TO EVALUATE THE HOT-CYCLE ROTOR-WING AND THE TILT-WING SYSTEMS TO DETERMINE THE VALIDITY OF CONTINUED EXPENDITURE OF FUNDS TOWARD DEVELOPMENT OF A V/STOL THAT WILL PRECLUDE ITS EMPLOYMENT IN THE FULL SPECTRUM OF THE RESCUE MISSION. WE RE-EMPHASIZE THAT GROWING DIVERSITY OF OPTIONS AND TASKS MAKES IT MUCH MORE URGENT THAN EVER, THAT V/STOL AIRCRAFT SYSTEMS CHARACTERISTICS BE MATCHED PRECISELY AND CAREFULLY TO OPERATIONAL REQUIREMENTS.

SECTION IX - BRIEFING

ATRAN: ANOTHER CONCEPT IN WHICH WE ARE INTERESTED IS ATRAN OR AUTOMATIC TERRAIN RECOGNITION AND NAVIGATION

SECRET CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ **CONFIDENTIAL**

SELF-CONTAINED GUIDANCE SYSTEM USED IN THE MACE A MISSILE TO GUIDE ITSELF OVER A PRE-DETERMINED COURSE FROM LAUNCH TO TARGET. THE SYSTEM COMPARES AIRBORNE RADAR INFORMATION WITH PRE-PLOTTED VIDEO MAP INFORMATION STORED ON 35 MM FILM. CAPABLE OF OPERATION OVER LAND ONLY, THE SYSTEM IS ENGAGED OVER A KNOWN POINT AFTER WHICH THE AIRCRAFT IS FLOWN BY THE SYSTEM THROUGH THE AUTOMATIC PILOT TO THE PRE-PLOTTED DESTINATION ARRIVING WITH AN AVERAGE ERROR OF LESS THAN 300 FEET, REGARDLESS OF THE DISTANCE TRAVELED. ALTITUDE CORRECTIONS ARE PROVIDED BY THE FILM STRIP BY PROGRAMMING RADAR ALTITUDE CHECK POINTS ON THE FILM AS FREQUENTLY AS DESIRED. THIS SYSTEM, IN OUR HC-130'S OR CH-3C'S, WOULD PERMIT PENETRATIONS INTO HOSTILE TERRITORY AT NIGHT OR IN ACTUAL WEATHER CONDITIONS FLYING AT 500 FEET ABOVE THE GROUND WITH A MINIMUM CREW FATIGUE FACTOR. WE BELIEVE THAT SUCH EQUIPMENT COULD PROVIDE AN INHERENTLY SAFE INFILTRATION OR EXFILTRATION CAPABILITY NEVER BEFORE ENJOYED BY THE USAF.

CURIOUSLY ENOUGH, THIS SYSTEM WAS BEEN USED IN THE AIR FORCE FOR A NUMBER OF YEARS BUT USED ONLY IN THE MISSILES. PERHAPS THIS WAS BECAUSE OF THE SECURITY SURROUNDING THE MISSILE SYSTEMS, BUT A MAJOR POINT HERE

~~SECRET~~ **CONFIDENTIAL**

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IS THAT THE ENTIRE SYSTEM IS AIR FORCE OWNED AND NOT AVAILABLE TO THE OTHER SERVICES. OF PARTICULAR SIGNIFICANCE IS THE PROGRAMMED PHASE-OUT OF THE MACE A SYSTEM IN THE LATTER PART OF 1966. THIS WILL MAKE 88 SETS OF THE GUIDANCE SYSTEM AVAILABLE TO BE USED OR SCRAPPED.

WE HAVEN'T HAD AN OPPORTUNITY TO FULLY EXAMINE THE POSSIBILITIES OF USING ATRAN SYSTEM FOR COMBAT RESCUE OR FOR OTHER PURPOSES. MANY APPLICATIONS APPEAR FEASIBLE FOR PEACETIME USES SUCH AS NAVIGATION IN REMOTE AREAS, AUTOMATIC LETDOWNS AT REMOTE AIRFIELDS WITHOUT AN APPROACH AID, OR EVEN EMERGENCY LETDOWNS IF THE APPROACH AID BECOMES INOPERATIVE. IF WE DETERMINE DEFINITE APPLICATION TO THE AIR RESCUE MISSION, WE PLAN TO REQUEST AN ENGINEERING STUDY TO DETERMINE THE COSTS OF REMOVAL FROM THE MACE, REDESIGN, AND INSTALLATION IN THE HC-130H.

SECTION IX

IN ADDITION TO ADVANCED AIRCRAFT AND ATRAN, WE ARE ALSO LOOKING AT THE POSSIBILITIES OF DEVELOPING A SYSTEM, OR SYSTEMS, WHICH WILL DETECT PERSONS OR AIRCRAFT CONCEALED FROM VISUAL OBSERVATIONS, AND NOT EQUIPPED

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

WITH BEACONRY. THIS MAY BE A FORM OF A LIGHT AMPLIFICATION SYSTEM, INFRA-RED APPLICATIONS OR MAGNETIC DEVICES.

WE ALSO FEEL THAT SATELLITE SYSTEMS MAY BE ADAPTED TO EMERGENCY AIRCRAFT OR PERSONNEL BEACONRY TO RECEIVE AND RELAY DISTRESS SIGNALS FIXING A LOCATION ON EARTH WITHIN REASONABLE SEARCH PARAMETERS. SATELLITES MAY ALSO BE EMPLOYED FOR RELAYING LOCATION AND IDENTIFICATION OF PERSONNEL DOWNED IN HOSTILE TERRITORY AND FOR PROVIDING A SECURE MEANS OF COMMUNICATING RECOVERY INFORMATION.

SUMMARY - BRIEFING

WE'VE COVERED A RATHER LARGE QUANTITY OF MATERIAL IN A RELATIVELY SHORT TIME, INCLUDING SOME PHILOSOPHIES AND CONCEPTS WHICH HAVE NOT BEEN PREVIOUSLY PRESENTED. RATHER THAN TO ATTEMPT A COMPLETE SUMMARY OF THE PRESENTATION, WE'D LIKE TO PRESENT AN OVERALL VIEW OF THE RESCUE AND RECOVERY MISSION AND FORCES VERSUS THE REQUIREMENTS.

SLIDE ON

FIRST, WE NEED A FIXED-WING FORCE TO MEET FORECAST RESCUE COVERAGE REQUIREMENTS FOR THE MANNED SPACE

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

PROGRAMS. THIS IS PROGRAMMED AND THE REQUIREMENT
WILL BE MET - BUT ONLY AT A COST OF DILUTING THE

your
OVERLAY #1

CONVENTIONAL SAR FIXED-WING CAPABILITY TO AN INEFFECTIVE
HANDFUL OF TIME-WORN AIRCRAFT. ^{SECOND} TO DO OUR JOB PROPERLY
THE CONVENTIONAL SAR FORCES MUST BE UPDATED AND INCREASED
IN NUMBERS. AS YOU CAN SEE, THESE FORCES ARE MUTUALLY
SUPPORTING AND, IN FACT, ARE IDENTICAL IN CAPABILITY,
WHICH WILL PROVIDE THE NECESSARY DEPTH IN FIXED-WING
RESOURCES, ESSENTIAL TO MEET OUR GLOBAL RESPONSIBILITIES.

~~SECRET~~
OVERLAY #2

~~WE~~ ~~WILL~~ ~~BE~~ ~~THE~~ ~~BACKBONE~~ ~~OF~~ ~~OUR~~ ~~COMBAT~~ ~~RECOVERY~~ ~~FORCES~~, ~~BUT~~
~~THEY~~ ~~ARE~~ ~~ALSO~~ ~~ESSENTIAL~~ ~~TO~~ ~~THE~~ ~~PEACETIME~~ ~~MISSION~~. ~~THESE~~
AIRCRAFT ARE AS CLOSE AS WE CAN COME TO A ~~TIME~~ VI STOL
CAPABILITY DURING THE PERIOD THEY ARE REQUIRED. THE
INTERRELATIONSHIP WITH THE SPACE RECOVERY FORCES AND
THE CONVENTIONAL SAR FORCES CAN, AND MUST, BE TIGHTENED
BY AN AIR-TO-AIR REFUELING SYSTEM, WHICH WILL GIVE ARS
A ~~TIME~~ GLOBAL RESCUE CAPABILITY FOR INJURED PERSONNEL

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

CONFIDENTIAL

OR GROUPS. THIS TEAM WILL PAY ITS WAY BY ELIMINATING THE REQUIREMENT FOR SUBSTANTIAL NUMBERS OF COMBAT SHIPS TIED UP IN SPACE RECOVERY PROGRAMS.

OVERLAY #3

THE FOURTH ELEMENT OF THE RESCUE FAMILY IS THE LOCAL BASE RESCUE HELICOPTER FORCES WHICH MORE THAN PAY FOR THEMSELVES EACH YEAR. THE INTERRELATIONSHIP STILL HOLDS WITH THE OTHER RESCUE FORCES BY PROVIDING A VERTICAL LIFT CAPABILITY TO SUPPLEMENT THE FIXED-WING FORCES, IF REQUIRED, AND A HIGH ALTITUDE CAPABILITY TO SUPPLEMENT THE LARGER HELICOPTERS AS THEY ARE DOING TODAY IN ETHIOPIA.

OVERLAY #4

EACH RESCUE ELEMENT HAS ITS JOB AND EACH CAN COMPLEMENT THE OTHER DEPENDING ON THE SITUATION. THESE CHARACTERISTICS WILL PERMIT US TO TAILOR A FORCE AS REQUIRED IN THE COMBAT SITUATION FROM RESCUE COVERAGE DURING TAKE OFF, ALONG THE ROUTES TO THE COMBAT AREA, PICKUP WITHIN THE COMBAT AREA EITHER SHORT RANGE OR LONG RANGE, AND DURING THE FINAL LANDING AT HOME BASE.

WE WANT TO REITERATE THAT RESCUE IS NOT A LUXURY BUT IS A FORCE WHICH TENDS TO PAY ITS WAY IN PEACETIME BY

CONFIDENTIAL

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

CONSERVING HUMAN AND MATERIAL RESOURCES. IN THE
COMBAT SITUATION, WE NOT ONLY BALANCE OUR CHECKBOOK
BUT GET AHEAD - NOT BY DESTROYING BUT BY SAVING. WE'RE
GOING TO NEED A LOT OF HELP IN REACHING THE POSTURE WE
BELIEVE NECESSARY TO BECOME A TRUE GLOBAL RESCUE
ORGANIZATION. THERE ARE MANY DETAILS IN OUR PAPER WHICH
HAVE NOT BEEN COVERED TODAY DUE TO LACK OF TIME. WE
ARE LOOKING FORWARD TO YOUR COMMENTS AFTER REVIEW
OF THE STUDY AND ARE ALSO SEEKING YOUR ACTIVE SUPPORT
IN ATTAINING AND MAINTAINING A GLOBAL RESCUE CAPABILITY
IN PEACE AND IN WAR, IN THE SENSIBLE ATMOSPHERE AND
SPACE.

THIS
PAGE
IS
UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

DECLASSIFIED

Air Force Studies In
AT&T Archives Program
McGraw Hill AIB, Alabama

RETURN TO

THIS PAGE IS UNCLASSIFIED

GROUP 1 EXCLUDED FROM AUTOMATIC DOWNGRADING AND DECLASSIFICATION
EXCEPT WHERE SHOWN OTHERWISE
DATE 11-11-99 BY 1045 JED/STW
THIS DOCUMENT IS CLASSIFIED UNLESS INDICATED OTHERWISE

AIR RESCUE SERVICE

"DEEP LOOK" BRIEFING (REVISED)

9 April 1965

Presented to Hq MATS
by Col Brooks

DO NOT DESTROY

CATALOGED CATALOGED CATALOGED
No 0005814

DOWNGRADING AND DECLASSIFICATION
DECLASSIFY ON: [] YEARS.
DOU

"Reproduced on 4 MAR 69 by PRXAR
by authority of AFMDC. Reproduced
Copy # 1 of 1 cy(s)."

DECLASSIFIED

ATCH 9

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CONFIDENTIAL~~
SLIDE # 1 - ON (ARS SHIELD)

PERHAPS ONE OF THE BEST POINTS OF DEPARTURE FOR A LOOK INTO THE FUTURE IS TO MAKE A BRIEF REVIEW OF THE PAST.

THE HISTORY OF THE AIR RESCUE SERVICE IS A SHORT ONE, BUT IT IS FULL OF INTEREST AND PROVIDES A NUMBER OF LESSONS WHICH CAN BE RELATED TO THE FUTURE. ONE OF THE OBSERVATIONS WHICH CLEARLY EMERGES IS THE FACT THAT RESCUE GETS A LOT OF ATTENTION WHEN THE SHOOTING STARTS, BUT IS REGARDED AS MORE OF A LUXURY WHEN THE COMBAT SITUATION EASES DOWN. IF YOU EXAMINE THE FORCES SPECIFICALLY EMPLOYED FOR RESCUE IN WORLD WAR II WITH THOSE THAT EXISTED IN THE LATE 40'S, YOU RECEIVE A CLEAR INDICATION OF WHAT HAPPENED. OF COURSE, THIS WAS NOT UNIQUE TO ARS - THE DRASTIC CUTBACKS OCCURRED THROUGHOUT THE MILITARY SERVICES. SUBSEQUENTLY, HIGH LEVEL DECISIONS WERE MADE THAT OUR MILITARY POSTURE WOULD BE BASED ON A POLICY OF STRATEGIC DETERRENCE AND MASSIVE RETALIATION. THIS POLICY ELIMINATED THE REQUIREMENT FOR COMBAT RESCUE UNITS. AND IN ADDITION, OVERRIDING PRIORITY HAD TO BE GIVEN TO THE STRATEGIC FORCES. AS A RESULT, JUST PRIOR TO KOREA, RESCUE HAD ONLY A HANDFUL

~~CONFIDENTIAL~~

OF ASSORTED AIRCRAFT.

ARXDC 65-220

~~CONFIDENTIAL~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
OF ASSORTED AIRCRAFT. / HOWEVER, WITHIN A MATTER
OF MONTHS, THERE WERE 50 SQUADRONS AND 12 GROUPS DEPLOYED
ON A GLOBAL BASIS.

WHEN THE SHOOTING STOPPED, RESCUE WAS ONCE
AGAIN DRASTICALLY REDUCED IN SIZE - DOWN TO 12
SQUADRONS WHICH WE HAVE TODAY. WHEN THE CONFLICT
IN VIETNAM STARTED, THE STORY WAS THE SAME - THERE
WAS NO COMBAT CAPABILITY IN THE RESCUE SERVICE.
TWO YEARS AFTER THE AIR FORCE HAD BEEN OPERATING IN
VIETNAM, AND AT A COST OF 2 1/4 MILLION DOLLARS, WE
WERE ABLE TO MUSTER A FORCE OF EXACTLY 6 SMALL
HELICOPTERS - HASTILY EQUIPPED WITH SUFFICIENT ARMOR
TO PERMIT OUR CREWS TO OPERATE IN A LIMITED COMBAT
ENVIRONMENT. THIS LITTLE GROUP IS DOING A
MAGNIFICENT JOB, AND THE RECENT ACHIEVEMENTS OF
OUR AIRCREWS HAS BEEN MOST IMPRESSIVE, BUT IT IS
CERTAINLY AN AUSTERE EFFORT BY ANY STANDARD.

THE PROPOSAL TO PUT 16 LONG-RANGE COMBAT
CONFIGURED CH-53C'S IN SOUTHEAST ASIA IS A NATURAL
FOLLOW-ON. BUT IT IS A MATTER OF CONCERN THAT
COMBAT RESCUE FORCES - ONCE AGAIN - HAVE TO BE
BUILT FROM SCRATCH.

IN TERMS OF

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IN TERMS OF / WORLD WAR II AND KOREA, WE HAD
TIME. NOW THE SITUATION IS DIFFERENT. THE STRATEGIC
AND TACTICAL FORCES ARE KEPT IN A CONTINUOUS STATE OF
READINESS, AND IT FOLLOWS, ON THE BASIS OF SIMPLE
LOGIC, THAT RESCUE SERVICE - TO BE EFFECTIVE AND
RESPONSIVE - MUST HAVE AN IN-BEING COMBAT AIRCREW
RECOVERY CAPABILITY NOW AND IN THE FORESEEABLE FUTURE.

SLIDE # 2 - ON (TOPICS)

AT THIS POINT, LET US REVIEW OUR MISSION AS
IT LOOKS TODAY. IT MAY BE CONSIDERED IN 4 BROAD CATEGORIES:

SLIDE # 3 - ON *MISSION*

overlaid FIRST, CONVENTIONAL RESCUE, INCLUDING BASE RESCUE.

SECOND, SURFACE RESCUE FOR THE SPACE PROGRAMS,
ESPECIALLY GEMINI, APOLLO AND MOL DURING THE
INTERMEDIATE TIME PERIOD.

overlaid THIRD, TACTICAL OR COMBAT RECOVERY OPERATIONS,
SUCH AS THOSE NOW BEING CONDUCTED ON A DAILY BASIS IN
SOUTHEAST ASIA, AND

overlaid FOURTH, AEROSPACE HARDWARE RECOVERY.

SLIDE # 3 - 1st Line - ON

CONVENTIONAL RESCUE IS THE DAY-TO-DAY
BUSINESS OF PROVIDING RESCUE COVERAGE FOR USAF

OPERATIONS, INCLUDING RESCUE

3

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CONFIDENTIAL~~
OPERATIONS, INCLUDING RESCUE ORBITS FOR DEPLOYING TACTICAL AIRCRAFT, AIR DEFENSE COMMAND EXERCISES, HIGH DENSITY TROOP AIRLIFTS, AND RECONNAISSANCE AIRCRAFT OPERATING IN THE PERIPHERY OF COMMUNIST COUNTRIES. FIXED-WING AIRCRAFT ARE ON SCRAMBLE ALERT STATUS ON THE AERIAL LOC'S FOR INTERCEPT AND ESCORT OF DISTRESSED AIRCRAFT, OR IF THE WORST HAPPENS, TO SEARCH FOR THE DOWNED PLANE AND PROVIDE ASSISTANCE. LIKEWISE, OUR LOCAL BASE RESCUE HELICOPTERS ARE ON ALERT AT 70 BASES TO PROVIDE CRASH FIRE SUPPRESSION AND RESCUE ON OR NEAR THE AIRFIELDS.

THE CONVENTIONAL RESCUE MISSION WILL CONTINUE AS LONG INTO THE FUTURE AS WE CAN SEE. SOME POSSIBLE EXPANSIONS TO THE LOCAL BASE RESCUE MISSION COULD OCCUR IF, FOR EXAMPLE, IT BECAME NECESSARY TO DISPERSE OUR TACTICAL FORCES ON A WIDESPREAD BASIS.

SLIDE # 3 - 2ND LINE ON
PROVIDING RESCUE AND RECOVERY FOR THE MANNED SPACE PROGRAMS IS A TASK WHICH IS GROWING IN DIRECT

PROPORTION TO THE

~~CONFIDENTIAL~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

PROPORTION TO THE / ACCELERATION OF OUR EXPLORATION
OF SPACE. OUR TASK IS TO PROVIDE SURFACE RESCUE
COVERAGE ~~FROM~~ ^{AT} THE LAUNCH PAD, AROUND THE GLOBE, AND
IN THE FINAL LANDING AREA. AT THE PRESENT TIME OUR
PRIMARY TASK IS TO RESCUE OR ASSIST THE CREW, BUT A
LOGICAL EXTENSION OF THIS MISSION IS TO ALSO RECOVER
THE SPACECRAFT. FROM A DOLLAR STANDPOINT, WE CAN
EQUIP AND PROVIDE THE ENTIRE SURFACE RECOVERY FORCE
AT FAR LESS COST TO THE GOVERNMENT THAN BY THE MEANS
PRESENTLY USED - AND WE CAN PROVIDE IT AT LEAST FIVE
TIMES AS FAST WITH LESS THAN ONE HALF THE PERSONNEL
ABOARD A SINGLE AIRCRAFT CARRIER. WE'RE LEARNING
MORE ABOUT THIS BUSINESS EVERYDAY AND FIND IT A
DEMANDING TASK TO DEPLOY AND CONTROL RECOVERY
FORCES AROUND THE GLOBE FROM 40°N TO 40°S. ONE
MAXIM HAS BECOME CLEARLY EVIDENT / TO BE EFFECTIVE,
- THESE FORCES MUST BE CENTRALLY CONTROLLED.

WE SEE AN EXPANSION OF THE SPACE RECOVERY
PROGRAM IN THE NEAR FUTURE, NOT ONLY IN FREQUENCY
BUT ALSO IN THE DURATION OF MISSIONS. WE MUST ALSO LOOK
BEYOND OUR 40°N AND 40°S BOUNDARIES TO THE TIME PERIOD
WHEN NUMEROUS ORBITS WILL TRACK OVER ALL PARTS OF THE
EARTH. SAC HAS INDICATED THAT OPERATIONAL MANNED
SYSTEMS MAY BE

people =
7-1
30K w
150K
IN
speed

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SYSTEMS MAY BE / EMPLOYED IN POLAR ORBITS AND HAS
RECOMMENDED THAT WE STUDY THE REQUIREMENT TO
PROVIDE COVERAGE FOR THIS SYSTEM.

SLIDE # 3 - 3D LINE ON

AS PREVIOUSLY MENTIONED, OUR CAPABILITY TO COVER
TACTICAL COMBAT FORCES IS PRACTICALLY NON-EXISTENT.
IN EUCOM AND PACOM ALONE, ARS IS TASKED IN 88 SEPARATE
CONTINGENCY PLANS, MOST OF WHICH REQUIRE A COMBAT
CAPABLE RESCUE FORCE. MANY COMMANDERS AND STAFF
OFFICERS MAY STILL HAVE MEMORIES OF RESCUE IN KOREA IN
THE BACKS OF THEIR MINDS AND SUBCONSCIOUSLY BELIEVE
ARS CAN RAPIDLY MUSTER A COMBAT-EQUIPPED RESCUE FORCE
TO DO THE JOB IN THE SAME MANNER. UNFORTUNATELY, WHEN
THE TACTICAL FORCES WERE BUILT UP A FEW YEARS BACK TO
COPE WITH THE LIMITED WAR PROBLEMS, RESCUE FORCES
WERE NOT SIMILARLY DEVELOPED. AS LONG AS WE'RE
GOING TO FIGHT WARS, IT IS LOGICAL TO ASSUME WE'RE
GOING TO NEED COMBAT RESCUE FORCES IN BEING.

SLIDE # 3 - 4TH LINE ON

THE MISSION OF RECOVERING AEROSPACE HARDWARE HAS
PROBABLY THE GREATEST POTENTIAL FOR EXPANSION OF ANY
OF OUR ASSIGNED TASKS. WE'RE JUST SCRATCHING THE
SURFACE ON REQUIREMENTS

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SURFACE ON REQUIREMENTS / AND VARIOUS AGENCIES ARE GRADUALLY BECOMING AWARE THAT ARS IS DESIGNATED AS THE USAF RECOVERY AGENCY. HOWEVER, IT SEEMS THAT MANY COMMANDS ARE EITHER NOT AWARE THAT HARDWARE RECOVERY IS AN ARS JOB OR FEEL THAT WE SHOULDN'T KNOW ABOUT IT BECAUSE OF THE SECURITY CLASSIFICATION. THIS RESULTS IN A DUPLICATION OF EQUIPMENT, AND OF MANPOWER, AND INEFFECTIVE UTILIZATION OF AIRCRAFT WHICH COULD BE USED FOR OTHER RESCUE PURPOSES WHEN NOT INVOLVED IN HARDWARE RECOVERY. SAC, ADC AND AFSC, EACH HAVE HARDWARE RECOVERY AIRCRAFT FOR THAT SOLE PURPOSE, SOME OF WHICH WERE DIVERTED FROM ARS AND GIVEN TO THE COMMAND TO DO THE JOB FOR WHICH WE ARE RESPONSIBLE.

WE SEE HARDWARE RECOVERY TASKS COMING UP WITH INCREASING FREQUENCY, WITH WEIGHTS RANGING FROM 150 LBS TO 10,000 LBS. SOME ARE AIR-TO-AIR RETRIEVALS AND SOME ARE RECOVERED FROM THE SURFACE. SOME ARE AIR FORCE PACKAGES AND SOME BELONG TO NASA AND OTHER AGENCIES. THE MAJOR POINT HERE IS THAT ONE AGENCY CAN DO THE JOB MORE ECONOMICALLY, PARTICULARLY SINCE THESE RECOVERIES ARE PREPLANNED, THUS PERMITTING THE AIRCRAFT AND CREWS TO BE USED FOR ANOTHER TASK WHEN NOT RECOVERING HARDWARE.

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

RESOURCE-WISE, OUR FIXED WING AIRCRAFT AND CERTAIN OF OUR HELICOPTERS ARE BEING USED INTERCHANGEABLY, THAT IS, THEY ARE NOT TIED TO ONE SPECIFIC TYPE OF MISSION. THE HU-16, FOR EXAMPLE, CAN BE AND IS USED IN ALL FOUR BROAD CATEGORIES OF MISSIONS (EXCEPT LBR). THE CH3C CAN BE USED THE SAME WAY, AND THE C-54 AND C-97 ARE EMPLOYED IN BOTH CONVENTIONAL AND SPACE OPERATIONS AND CAN BE USED, UNDER CERTAIN CIRCUMSTANCES, IN COMBAT OPERATIONS. - THIS PROVIDES THE BASIC FLEXIBILITY FOR RESCUE OPERATIONS ON A GLOBAL SCALE BUT WE ARE THINLY SPREAD BY ANY REASONABLE STANDARDS.

SLIDE #3 - OFF

SLIDE #4 - ON *ARS World Wide Deployment*

AIR RESCUE SERVICE HAS 91 UNITS AT 87 LOCATIONS IN THE UNITED STATES AND 21 FOREIGN COUNTRIES. WITH THE RADIUS OF ACTION OF PRESENTLY ASSIGNED AIRCRAFT, WE CAN PROVIDE RAPID RESCUE COVERAGE FROM HOME BASES TO THE AREAS IN PROXIMITY TO THEIR LOCATION. FOR PREPLANNED MISSIONS, WE CAN PROVIDE RESCUE COVERAGE WHERE AND WHEN NEEDED, BUT IT IS NECESSARY TO DIGRESS A MOMENT TO DISCUSS THE TERM "RESCUE".

IN PLAIN LANGUAGE, IT MEANS TO PHYSICALLY PICK SOMEBODY UP AND DELIVER THEM TO SAFETY. THIS

MEANS ANY PERSON

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~CONFIDENTIAL~~
MEANS ANY PERSON/ INCLUDING THOSE INCAPABLE OF HELPING
THEMSELVES. WE CAN DO THIS ONLY WITH THE HELICOPTERS
AND, TO A LIMITED DEGREE, WITH THE HU-16.

SLIDE#4 - OFF

SLIDE # 5 - ON *SA-16*

WE SAY TO A LIMITED DEGREE, BECAUSE THE HU-16
CAN LAND ON THE WATER (NORMALLY DURING DAYLIGHT ONLY)
UNDER RELATIVELY SMOOTH SEA CONDITIONS. WE ARE VERY
PLEASED WITH THE SAVES WHICH HAVE BEEN MADE RECENTLY OFF
VIETNAM USING THE HU-16, BUT WE HAVE TO ACKNOWLEDGE THAT
CONDITIONS WERE JUST RIGHT. FOR EXAMPLE, DURING 1963
AND 1964, HU-16'S MADE ONLY 7 OPERATIONAL WATER LANDINGS
SAVING A TOTAL OF 5 PERSONNEL AND NONE OF THESE WERE USAF
CREWMEMBERS. THE HC-54 AND THE HC-97, OF COURSE, CAN'T
EVEN DO THIS MUCH. THEIR CAPABILITY LIES IN FINDING THE
INDIVIDUAL AND DROPPING EITHER PARARESCUE TEAMS OR
SURVIVAL EQUIPMENT, THEN ARRANGING FOR SOME OTHER
VEHICLE TO ACTUALLY RESCUE THEM. SO, IN REALITY, THESE
AIRCRAFT ARE RENDERING AID OR ASSISTANCE - NOT RESCUE.
THIS HAS BEEN AN ACCEPTABLE METHOD OF PROVIDING ASSISTANCE,
PRIMARILY BECAUSE THERE WASN'T ANYTHING BETTER, ^{but} THIS IS
WHERE THE CHALLENGE LIES.

SLIDE # 5 - OFF

SLIDE #6 - ON (BASIC) *ARR SA LOCATION*

IN RESPECT TO

GETTING BACK TO

~~CONFIDENTIAL~~
CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

IN RESPECT TO OUR UNIT LOCATIONS, WE HAVE FOUND THAT THE EXISTING LOCATIONS HAVE SERVED US WELL IN THE AIR AGE. HOWEVER, WITH THE GRADUAL BLENDING OF AERONAUTICS AND ASTRONAUTICS, IT HAS BECOME APPARENT THAT WE MUST EXTEND OUR RESCUE/RECOVERY RESOURCES TO COVER SPACE PROJECTS AS WELL AS AIR OPERATIONS. WE FEEL THAT WE CAN DO THIS ON A DEPLOYMENT BASIS BY ROTATING THE AIRCRAFT AND CREWS FROM EXISTING LOCATIONS AS REQUIRED.

SLIDE # 6- OFF

SLIDE # 7 - ON *CH-3C*

WE NOW HAVE FOUR CH3C'S AT PATRICK AFB TO PROVIDE AN EFFECTIVE RESCUE CAPABILITY IN CASE OF A LAUNCH PAD ABORT, AND TO PARTICIPATE IN THE MANY OTHER MISSIONS DIRECTLY CONNECTED WITH EASTERN TEST RANGE SPACE OPERATIONS. THIS PROGRAM IS A FIRST STEP IN THE RIGHT DIRECTION FOR OUR EXPANDED ROLE, BUT IS CERTAINLY NOT AN END IN ITSELF. THIS SUBJECT WILL BE DISCUSSED FURTHER A LITTLE LATER ON. CONSIDER NOW THE TYPES AND NUMBERS OF RESCUE AIRCRAFT REQUIRED TO ACCOMPLISH OUR ASSIGNED MISSIONS.

SLIDE # 7 - OFF

SLIDE # 8 - ON *130 500 LOCATION & RADIUS*

FIRST, FIXED-WING

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

~~CONFIDENTIAL~~

FIRST, FIXED-WING AIRCRAFT. AS OF THE FIRST OF JAN 67, OUR CONVERSION TO HC-130 WILL HAVE BEEN COMPLETED AND THE HC-54'S AND HC-97'S RETIRED OR REASSIGNED TO RESERVE UNITS. . AS CURRENTLY PROGRAMMED, THE FORCE WILL CONSIST OF 54 UE HC-130'S WITH 6 ADDITIONAL COMMAND SUPPORT, AUGMENTED BY 30 HU-16'S WITH 4 ADDITIONAL FOR COMMAND SUPPORT. THIS WOULD BE AN EFFECTIVE FORCE FOR THE NORMAL DAY-TO-DAY FIXED-WING MISSION OF PROVIDING PRECAUTIONARY AND EMERGENCY COVERAGE FOR DEPLOYING TACTICAL AIRCRAFT, AND OTHER AREA MISSIONS, SUCH AS ADVANCED STRIP ALERT OR ORBIT FOR AIRCRAFT ENGAGED IN RECONNAISSANCE IN THE PERIPHERY OF RED CHINA OR RUSSIA.

OVERLAY #1 - ON *App 66 Deployments*

BUT SUPER-IMPOSED ON TOP OF THE NORMAL MISSION REQUIREMENTS IS THE SPACE RECOVERY MISSION WHICH ~~REQUIRES~~ *involves* EXTENSIVE DEPLOYMENT, AS SHOWN ON THIS SLIDE. THIS IS TYPICAL OF THE DEPLOYMENT REQUIRED, HOWEVER, SPECIFIC LOCATIONS MAY CHANGE FROM TIME TO TIME, DEPENDING ON THE PLANNED GROUND TRACK OF THE ORBITING SPACECRAFT. GENERALLY SPEAKING, HOWEVER, THIS FORCE MUST BE DEPLOYED SO AS TO LOCATE THE SPACECRAFT IN ANY LOCATION AROUND THE GLOBE FROM 40°N TO 40°S, AND THEN TO RECOVER

11

OR RENDER AID

~~SECRET~~

~~CONFIDENTIAL~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

OR RENDER AID/ TO THE CREW WITHIN 1-18 HRS AFTER THE SPACECRAFT HAS RE-ENTERED THE EARTH'S ATMOSPHERE.

~~DEPENDENT ON THE SITUATION~~ THIRTY-SIX (36) AIRCRAFT ARE REQUIRED TO MEET THE CONTINGENCY RE-ENTRY REQUIREMENTS. IN ADDITION TO CONTINGENCY DEPLOYMENT, WE ~~WILL BE~~ *MUST* *ALSO* PROVIDE 10 HC-130'S FOR PINPOINTING THE SPACECRAFT IN THE PLANNED LANDING AREA. ~~UNLESS~~ IN THE CASE OF

SLIDE OVERLAY #1 - OFF

SLIDE #9 - ON *APOLLO FOOTPRINT*

APOLLO MISSIONS, ~~WE ARE DEALING WITH~~ *we are dealing with* A LANDING FOOTPRINT OF 1000 X 5000 MILES. *Thus* THE TOTAL REQUIREMENT ADDS UP TO 46 HC-130'S. ~~FOR THE APOLLO SPACE RECOVERY MISSION.~~ *FOR* THIS EQUATES TO

APPROXIMATELY 76% OF THE TOTAL 60 ACFT FOR WHICH WE ARE PROGRAMMED. HOWEVER, 6 OF THIS NUMBER ARE COMMAND SUPPORT SO THAT AIRCREWS AND ADDITIONAL MAINTENANCE PERSONNEL MUST COME OUT OF OUR HIDE TO MEET THE 46 AIRCRAFT REQUIREMENT. WE FEEL ONE OF THE FIRST ACTIONS THAT MUST BE TAKEN TO ESTABLISH AN EFFECTIVE SPACE RECOVERY FORCE IS TO HAVE THESE 6 COMMAND SUPPORT AIRCRAFT DESIGNATED AS UE. AT ~~THESE~~ DEPLOYED LOCATIONS OUR AUGMENTED CREWS AND MAINTENANCE PERSONNEL WILL BE ON CONTINUOUS RAPID REACTION ALERT FOR THE DURATION OF THE

SPACE FLIGHT. *AM*

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

DESIGNATING 6 ~~SECRET~~ CONFIDENTIAL
SPACE FLIGHT. / ~~W/A~~ ADDITIONAL AIRCRAFT ~~AS~~ AS
WE WILL ALLEVIATE THIS SITUATION TO A DEGREE BY PROVIDING
ADDITIONAL MANPOWER SPACES.

SLIDE # 9 - OFF

SLIDE # 10 - ON - HU 16 LOCATIONS

DEPLOYMENT OF THE IN-COMMISSION HC-130 FLEET
WILL LEAVE 30 HU-16'S IN 4 SQUADRONS TO RESPOND TO ALL
OTHER USAF SAR REQUIREMENTS AROUND THE GLOBE. WHILE
OUR HC-130 FLEET IS TOTALLY INVOLVED IN SPACE RECOVERY,
THE REMAINDER OF THE RESCUE FLEET THEORETICALLY PICKS UP
ALL REMAINING SEARCH, RESCUE AND RECOVERY MISSIONS.
IN ACTUAL PRACTICE, THE HC-130'S ON SPACE ALERT CAN OFTEN
RESPOND TO AN EMERGENCY REQUIREMENT SO THAT, IN FACT, OUR
BASE AREA OF OPERATIONS AROUND THE GLOBE IS EXPANDED.
HOWEVER, THE ACTUAL NUMBERS OF AIRCRAFT ON THE NORMAL
LINES OF COMMUNICATION ARE DIMINISHED, AND, IN FACT,
DIMINISHED TO AN UNACCEPTABLE DEGREE.

SLIDE # 10 - OFF

SLIDE # 11 - ON - HU 16 breakdown

THREE OF THESE, BY TAIL NUMBER, ARE
ASSIGNED TO THE HU-16 SCHOOL WHERE THEY ARE
REQUIRED TO INSURE THE

FLOW OF QUALIFIED

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

FLOW OF QUALIFIED PERSONNEL TO OUR OVERSEAS HU-16
UNITS. APPLYING THE STANDARD IN-COMMISSION RATE OF
71% TO THE REMAINDER OF 27,

OVERLAY #1 - ON

WE COME UP WITH 19 ACFT FOR THE TOTAL NORMAL SAR FUNCTION.

OVERLAY #2 - ON

5 OF THESE ARE DEPLOYED IN VIETNAM ON A ROTATIONAL BASIS,
LEAVING A TOTAL OF 14 AVAILABLE.

OVERLAY #3 - ON

2 ARE ON CONTINUOUS DEPLOYMENT TO HOMESTEAD AFB FOR
CARIBBEAN COVERAGE, WHICH IS AN INDEFINITE COMMITMENT,
LEAVING 12 AVAILABLE WORLD-WIDE.

OVERLAY #4 - ON

OF THESE 12, 5 WILL BE REQUIRED FOR EMERGENCY ALERT AT
EACH SQDN LOCATION NOT COVERED BY THE HC-130 FLEET,
LEAVING AN AVERAGE OF 7 ~~ACFT~~ PER DAY.

OVERLAY #5 - ON

ADVANCED BASE STRIP ALERT REQUIREMENTS OF 3 AIRCRAFT
PER DAY DIMINISH THIS NUMBER TO 4 HU-16'S TO MEET ALL
OTHER USAF GLOBAL REQUIREMENTS, OTHER THAN EMERGENCY.

~~EVEN THIS FIGURE IS SOMEWHAT SUSPECT IF WE CAN JUDGE
BY RECENT MIAN AVERAGES OF 7 HU-16'S AT A GIVEN TIME,
WHICH IS 3 MORE THAN THE 4 ACFT COMMAND SUPPORT CUSHION.~~

NOW, THESE ARE

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

NOW, THESE ARE AIRFRAMES WE'RE TALKING ABOUT -
NOT STATISTICS - AND, AS MUCH AS WE'D LIKE TO, WE CAN'T
JUGGLE AIRFRAMES, ~~LIKE WE MANIPULATE STATISTICS.~~
SECONDLY, WE'RE NOT TALKING ABOUT PERIODS OF TWO OR THREE
DAYS FOR SPACE RECOVERY DEPLOYMENT, BECAUSE DURING THIS
PERIOD, ~~THE SPACE PROGRAMS OVERLAP.~~
PROGRAMS OVERLAP.

SLIDE # 11 - OFF

SLIDE # 12 - ON

*Gemini, Apollo, MOL
schedule*

~~OUR DEPLOYMENT~~
REQUIREMENTS, ~~THE FREQUENCY AND OVERLAP OF SPACE~~
LAUNCHES INCREASES THROUGH 1967, UNTIL IN 1968 THE HC-130
FLEET WILL BE DEPLOYED AT LEAST 50% OF THE TIME. FOR
EXAMPLE, IN JULY, AUGUST AND SEPTEMBER OF 1968, TENTATIVE
SCHEDULES CALL FOR TWO APOLLO LUNAR MISSIONS OF 10 DAYS
EACH AND ONE MOL MISSION OF 30 DAYS. THESE COULD
OCCUR ALL IN THE SAME 30-DAY PERIOD, BUT WE HAVE TO PLAN
FOR THE ~~Worst~~ ^{MOST DEMANDING} SITUATION. BY TACKLING ON 3 DAYS ON EACH
END OF EACH MISSION FOR DEPLOY ^{MENT} ~~ING~~, REDEPLOY ^{MENT} ~~ING~~ AND
EXERCISE ~~ING~~, IT IS POSSIBLE THAT THE HC-130'S WILL BE
DEPLOYED 75% OF THE TIME. IN EITHER CASE, IN EXCESS OF
50% APPEARS TO BE A REASONABLE ASSUMPTION. BY 1970,
CURRENT FORECASTS LEAD US TO BELIEVE THAT THERE WILL BE

MEN IN SPACE

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

MEN IN SPACE/ CONTINUOUSLY AND, AT ANY TIME, AT ANY LOCATION AROUND THE GLOBE, AN EMERGENCY IN THE SPACECRAFT MAY REQUIRE IMMEDIATE RE-ENTRY FOR A CONTINGENCY LANDING. THIS MEANS CONTINGENCY DEPLOYMENT 100% OF THE TIME WHEN THIS COMES TO PASS.

THIS, THEN IS HOW THE FUTURE LOOKS FOR THE CURRENTLY PROGRAMMED FIXED-WING AIRCRAFT. ADDITIONAL RESOURCES MUST BE MADE AVAILABLE ^{IF WE ARE TO} DO THE JOB PROFESSIONALLY.

SLIDE # 12 - OFF

SLIDE # 13 - ON

130, Apollo Deployment

SPECIFICALLY, AN AUGMENTATION OF 41 UE HC-130H ACFT IS REQUIRED TO REPLACE THE HU-16'S STARTING IN THE THIRD QUARTER OF FISCAL 67. THE HU-16 HAS PLAYED AN IMPORTANT ROLE IN RESCUE IN THE PAST BUT ^{IT} IS TIME-WORN, OBSOLESCE^{NT}, AND INCREASINGLY DIFFICULT AND COSTLY TO MAINTAIN. THE USAF IG RECOGNIZED THIS IN THE RECENT ARS CAPABILITY REPORT, AND FIRM ACTIONS MUST BE TAKEN NOW IF WE ARE TO PROGRAM REPLACEMENT IN FISCAL 67.

OVERLAY # 1 - ON *ALASKA*

THESE ADDITIONAL HC-130'S WILL BE ASSIGNED TO EXISTING SQUADRONS, WITH THE EXCEPTION OF 5 ACFT, WHICH WILL

FORM THE FIXED-WING

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ ~~CONFIDENTIAL~~
FORM THE FIXED-WING ELEMENT OF A SQUADRON TO BE
ACTIVATED IN ALASKA. * JUSTIFICATION FOR THIS NEW UNIT
IS CONTAINED IN THE DOCUMENT BUT, SIMPLY STATED, THERE
IS A LARGE GAP IN RESCUE CAPABILITY IN THE POLAR REGIONS,
~~AND~~ *we now have* SUFFICIENT AND SIGNIFICANT MILITARY TRAFFIC TO
JUSTIFY THE ESTABLISHMENT OF A NEW UNIT. ~~THIS~~

US ~~THE~~ *with* THE 67TH ARSQ OPERATING FROM PRESTWICK, ~~WE WILL~~ *will provide*
~~THE~~ A MUCH IMPROVED CAPABILITY TO COVER THE NORTH
POLAR REGION, AS SHOWN ON THIS SLIDE.

SLIDE # 13 - OFF

SLIDE # 14 - ON *New North coverage 5 circles*

TO SUMMARIZE THE FIXED-WING REQUIREMENTS, WE
BELIEVE THE FOLLOWING ACTIONS ARE REQUIRED TO PROVIDE THE
AIRCRAFT NECESSARY TO MEET ASSIGNED MISSIONS.

SLIDE # 14 - OFF

SLIDE # 15 - ON *actions required*

1. REDESIGNATE THE 6 HC-130H COMMAND SUPPORT
AIRCRAFT AS UE AIRCRAFT.

overlay 2. COMMENCE PHASE-OUT OF THE HU-16, STARTING
IN FFY 3/67.

overlay 3. REPLACE THE HU-16'S WITH HC-130'S, BUILDING
TO A TOTAL FORCE OF 101 UE WITH ¹⁰ ~~10~~ COMMAND SUPPORT ACFT
BY FY 4/68.

17

~~SECRET~~

4. ACTIVATE THE XX

~~CONFIDENTIAL~~

THIS
PAGE
IS
UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

overlpy 3

~~SECRET~~ CONFIDENTIAL
4. ACTIVATE THE XX ARSQ AT ELMENDORF AFB,
ALASKA IN FY 3/68.

THIS IS NOT A PROGRAM DESIGNED TO ENLARGE
RESCUE AS AN END IN ITSELF. THE REQUIREMENT FOR EACH
AIRCRAFT IS DOCUMENTED IN OUR STUDY, AND THE RECOMMENDED
FORCE WILL REMAIN AUSTERE THROUGHOUT THE PERIOD IN
RELATION TO THE JOBS TO BE DONE.

SLIDE # 15 - OFF

SLIDE # 16 - ON - 8130 picture

~~SECRET~~ SOME OPENING COMMENTS
REGARDING AID OR ASSISTANCE VS RESCUE MIGHT LEAD TO
A CONCLUSION THAT EXPENDITURES FOR ADDITIONAL HC-130H'S
CANNOT BE JUSTIFIED ON THE BASIS OF AID TO BE RENDERED
RATHER THAN RESCUES TO BE PERFORMED. THE FACTS ARE THAT
THE DISTRESSED PERSONNEL MUST BE FOUND BEFORE THEY CAN
BE RESCUED, AND RAPID LOCATION IS OF THE UTMOST IMPORTANCE.
SINCE THE CHANGES FOR SURVIVAL DECREASE RAPIDLY FOLLOWING A
CRASH OR BAIL-OUT, DUE TO SHOCK, INJURY, OR EXPOSURE.
THIS DICTATES THAT THE PRIMARY SEARCH AIRCRAFT HAVE
SUFFICIENT SPEED, RANGE, AND ENDURANCE CAPABILITIES
TO COPE WITH THE LOCATION PROBLEM, SUPPLEMENTED BY A
CAPABILITY TO PROVIDE ON-SCENE ASSISTANCE BY DROPPING
SURVIVAL GEAR OR PARA-RESCUE TEAMS, IF REQUIRED. THE
HC-130H FILLS THE BILL FOR THIS REQUIREMENT IN THE CASE

~~SECRET~~ OF THE SPACE
CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

OF THE SPACE/ RECOVERY OR NORMAL LOC MISSION.
IT ALSO HAS THE CAPABILITY TO RETRIEVE INDIVIDUALS
OR SMALL GROUPS BY EMPLOYMENT OF THE FULTON
RECOVERY SYSTEM. WE HAVE A SHORT FILM WHICH
WILL SHOW YOU HOW THE FULTON SYSTEM WILL BE
USED.

SLIDE # 16 - OFF

FILM - ON

However, THERE ARE LIMITATIONS

IN THE SYSTEM

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IN THE SYSTEM/ UNDER CERTAIN TERRAIN CONDITIONS, SUCH AS A STEEP SLOPE OR CANYON. CEILING AND VISIBILITY ARE ALSO POSSIBLE LIMITING FACTORS, SINCE THE BALLOON COULD BE IN THE CLOUDS IF THE CEILING WAS LESS THAN 600 FT, OR THE AIRCRAFT COULD NOT MANEUVER TO ENGAGE THE SYSTEM UNDER LOW VISIBILITY CONDITIONS. IF THE RECOVERY REQUIREMENT EXCEEDS THE HC-130 SYSTEM CAPABILITIES, THE OPTIONS ARE TO ATTEMPT RESCUE BY OPPORTUNE SURFACE MEANS OR TO PROVIDE A COMPLEMENTARY SYSTEM. OUR STUDIES INDICATE THE CH-3C HELICOPTER IS THE IMMEDIATE ANSWER.

SLIDE #17 - ON *picture*

AS A RESULT OF THE CAT III TESTS CONDUCTED FOR USAF BY OUR DETACHMENT AT PATRICK AFB, WE ARE PARTICULARLY ENTHUSIASTIC ABOUT THE CH-3C. IN ALL CASES, PERFORMANCE OF THIS AIRCRAFT HAS EXCEEDED THE MANUFACTURER'S CLAIMS. *IT provides a big*

step forward in OUR ULTIMATE GOAL ^{OF} AN AIR RESCUE FORCE CONSISTING OF A CAREFULLY COMPUTED MIX OF A MINIMUM NUMBER OF AIRCRAFT TYPES. IN THIS COMBINATION WE

MUST HAVE AIRCRAFT

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
MUST HAVE AIRCRAFT WHICH POSSESS OCEAN SPANNING RANGE AND HIGH SPEED, AND ALSO HAVE THE LOW DOWNWASH HOVERING AND CONTROL QUALITIES OF THE PRESENT HELICOPTER. WE WILL ALSO NEED HEAVY-LIFT AERIAL CRANE VEHICLES. THIS TYPE, NOW WITHIN THE STATE-OF-THE-ART, WILL BE DISCUSSED LATER.

UNTIL SUCH A VEHICLE MIX IS OPERATIONAL, PRESENTLY AVAILABLE LONG-RANGE, FIXED-WING AIRCRAFT, IN COMBINATION WITH SUFFICIENT QUANTITIES OF HIGH-PERFORMANCE HELICOPTERS, WILL BE REQUIRED TO ENABLE ARS TO RESCUE PEOPLE AND RECOVER HARDWARE FROM ANY PLACE AT ANYTIME.

IN ESSENCE, THIS IS NOT A NEW CONCEPT, HU-16'S TEAMED WITH H5'S AND H-19'S TO RESCUE NEARLY 10,000 MILITARY PERSONNEL DURING THE KOREAN WAR. THE HU-16 DID THE SEARCH-LOCATION JOB AND WHEN CONDITIONS WERE RIGHT, ALSO PERFORMED THE ACTUAL RESCUE. NINE THOUSAND TIMES IN THAT WAR, ^{however} ~~the~~ CONDITIONS WEREN'T RIGHT - AND THE RESCUE WAS PERFORMED BY ~~the~~ HELICOPTERS OF THAT DAY.

THE CONCEPT OF MATING THE HELICOPTER AND THE FIXED-WING AIRCRAFT CONTINUED AFTER KOREA, BUT NO SUBSTANTIAL IMPROVEMENTS WERE MADE IN EITHER VEHICLE TO ENHANCE THE COMBAT RESCUE FORCE. ~~SECRET~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
The ~~RESCUE~~ FORCE NOT ONLY DWINDLED IN SIZE, BUT NONE OF THE MEANINGFUL DEVELOPMENTS IN HELICOPTERS WERE INCORPORATED IN AIR RESCUE SERVICE EQUIPMENT TO KEEP AND UPDATE THE CONCEPT. TO THE CONTRARY, BY 1961 THIS STILL VALID CONCEPT WAS DORMANT. USAF'S COMBAT AIR RESCUE FORCE CONSISTED OF 56 FIXED-WING AIRCRAFT - 20 SA-16'S AND 36 C-54'S. WE COULD SEARCH, LOCATE, RENDER AID (BY PARARESCUE) AND ACTUALLY RESCUE A FEW PEOPLE, BUT ONLY WITHIN THE LIMITED CAPABILITY OF THE SA-16.

FORTUNATELY, ~~RESCUE~~ SOME MEANINGFUL IMPROVEMENTS IN HELICOPTERS DID TAKE SHAPE IN THE AIRCRAFT INDUSTRY. TWIN-TURBINE, HIGH-SPEED, ALL-WEATHER ~~RESCUE~~ HELICOPTERS WERE DEVELOPED AS A PRIME WEAPON SYSTEM FOR USE IN ANTI-SUBMARINE WARFARE. THIS IS SIGNIFICANT BECAUSE MANY OF THE REQUIREMENTS AND ELEMENTS OF THE ASW MISSION HAVE VALID APPLICATION ~~TO~~ ^{TO} THE COMBAT AIR RESCUE HELICOPTER MISSION. THESE ELEMENTS ARE THE ABILITY TO TRANSIT ALL-WEATHER CONDITIONS, INCREASED RANGE FOR SEARCH, ~~PROLONGED~~ HOVER, SELF-CONTAINED DOPPLER NAVIGATION SYSTEM, INCREASED CRUISE SPEED, AND A TRIPHIBIOUS CAPABILITY. THESE AND OTHER IMPROVEMENTS WERE INCORPORATED IN THE SIKORSKY S-61, ~~THE~~ ^{THE} FORERUNNER OF THE CH3C, WHICH WAS SELECTED TO

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ ~~CONFIDENTIAL~~
WAS SELECTED TO MEET SOR 190. THREE OF THE
5 MISSIONS FOR WHICH IT WAS PROCURED ARE THOSE
FOR WHICH WE ARE RESPONSIBLE. THESE ARE AEROSPACE
HARDWARE RECOVERY, ~~combat~~ RECOVERY, AND
AIRLIFT. HOWEVER, NONE OF THE 107 AIRFRAMES WERE
PROGRAMMED INTO ARS. THEY WERE FRAGMENTED AND
PROGRAMMED INTO 5 MAJOR AIR COMMANDS. MATS, ADC,
AND ATC WERE ALTERNATELY DESIGNATED AS THE "USING"
COMMANDS TO CONDUCT CATEGORY III ~~TESTS~~.
~~TESTS~~. AS YOU KNOW, IN MAY 1964, USAF RE-
DIRECTED MATS AS THE CH3C "USING COMMAND". ARS
TOOK OVER THE ACTUAL ~~TEST~~ TEST PROGRAM FROM
ATC. SINCE THIS PROGRAM HAS BEEN ASSIGNED AND
PERFORMED BY ARS, IT HAS STAYED ON, OR AHEAD OF,
SCHEDULE.

TODAY ONLY 4 CH3C'S ARE ASSIGNED IN ARS
AT PATRICK AFB. 4 MORE ARE PROGRAMMED INTO ~~our~~ the
DETACHMENT AT GOODFELLOW, FOR AN AUSTERE TOTAL OF 8.
EVEN PRIOR TO THESE EVENTS, ARS VIEWED THE CH3C'S AS
THE BEST AVAILABLE VTOL AIRCRAFT TO COMPLEMENT
PROGRAMMED FIXED-WING HC-130'S TO PROVIDE AN UPDATED
COMBAT RESCUE AND HARDWARE RECOVERY FORCE.

~~SECRET~~

~~CONFIDENTIAL~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

THE TEST RESULTS/ CONFIRMED OUR VIEW, AND
ARS SUBMITTED QOR'S TO BETTER ADAPT THE CH3C FOR THE
ARS MISSION TO INCLUDE AIR-TO-AIR REFUELING FROM THE
HC-130H.

SLIDE # 17 - OFF

SLIDE # 18- ON *AIR TO AIR*

ASD PRELIMINARY FLIGHT TESTS INITIALLY INDICATE AIR-TO-
AIR REFUELING FEASIBLE, BUT TO DATE NO FURTHER ACTIONS
HAVE BEEN TAKEN. WE'VE PROVEN THAT THE CH3C HAS A
PRACTICAL 1000 MILE RANGE USING INTERNAL AUXILIARY
TANKS, TAKING OFF AND LANDING VERTICALLY. WE BELIEVE
RUNNING TAKE-OFFS WOULD INCREASE THE RANGE TO ABOUT
1500 NM, BUT THIS HAS NOT BEEN TESTED. THE ABILITY
TO AIR-TO-AIR REFUEL WOULD GIVE THE CH3C UNPARALLELED
LONG-RANGE RESCUE CAPABILITY WITHOUT DEPENDENCE ON,
OR DEPLETION OF, CRITICAL AIRLIFT FORCES - THAT IS:
RESCUE WHERE IT'S NEEDED, WHEN NEEDED, WITHOUT
COSTLY TEAR-DOWN, OR REASSEMBLY.

WITH AIR-TO-AIR REFUELING A PRACTICAL REALITY,
RECOVERY OF INJURED OR NON-AMBULATORY ASTRONAUTS ALSO
BECOMES A PRACTICAL REALITY AT GREATER RANGES. THE FIRST
OF 27 PROJ APOLLO MISSIONS IS PROGRAMMED FOR THE FIRST

QUARTER OF CALENDAR

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

QUARTER OF CALENDAR YEAR 1966. THE MANNED OR "500"
SERIES MISSIONS BEGIN IN THE 3D QUARTER OF CALENDAR
YEAR 1967. WE KNOW THAT 60 UE HC-130H'S WILL BE IN
THE ARS INVENTORY BY THIS TIME. ^{However} UNLESS THE CH3C,
CAPABLE OF BEING AERIAL REFUELED, IS ALSO IN THE INVENTORY,
OUR RECOVERY FORCE WILL BE LIMITED TO COMPLETE DEPENDENCE
UPON THE FULTON RECOVERY SYSTEM. WE KNOW THAT SAFETY
OF THE ASTRONAUTS, ~~FROM A NUMBER OF~~ IS OF PARAMOUNT
CONCERN, ~~AND THAT~~ TERRAIN
OR WEATHER CONDITIONS ~~WILL~~ MAY
ENTIRELY RULE OUT EMPLOYMENT OF THE SYSTEM FOR SPACE
RECOVERY MISSIONS. ~~THIS FACT MAKES~~ A BACK-UP
RECOVERY CAPABILITY ~~MANDATORY~~. ~~TO THE~~
~~THE REQUIREMENT FOR~~ ONE TO 18 HRS ACCESS TIME FOR CONTINGENCY RECOVERY,
PLUS THE ECONOMICS OF EMPLOYING NUMEROUS U. S. NAVY
SHIPS OF THE LINE AS HELICOPTER CARRIERS, MITIGATE AGAINST
THEIR CONTINUED USE. A GLOBAL AIR RECOVERY MIXED FORCE
IS REQUIRED NOW AND THROUGHOUT THE 1975 TIME PERIOD, AND
THE IMMEDIATE REQUIREMENT IS FOR ~~CH3C'S~~ CH3C'S
TO OPERATE IN CONJUNCTION WITH THE HC-130H ~~S.~~

SLIDE #18 - OFF

SLIDE #19 - ON

HH43 PICTURE

(LOCAL BASE RESCUE (LBR)) - WHEN THE CH3C'S ARE
IN THE INVENTORY

~~SECRET~~ CONFIDENTIAL

T
H
I
S
P
A
G
E
I
S
U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IN THE INVENTORY / WE WILL REPLACE LIMITED PURPOSE LOCAL
BASE RESCUE HELICOPTERS ON THOSE BASES WHERE WE'VE
PROGRAMMED THE CH3C. THIS IS POSSIBLE BECAUSE THE
CH3C IS ALSO AN EXCELLENT FIRE-SUPPRESSION HELICOPTER
AND ABLE TO BE SCRAMBLED IN 3 MINUTES OR LESS. WE ARE
OF THE OPINION THAT THE CURRENT CONCEPTS OF LOCAL BASE
RESCUE WILL REMAIN VALID AS LONG AS WE HAVE HIGH-PERFORMANCE
COMBAT AIRCRAFT. TODAY, THERE IS NO PROGRAM TO UPDATE
THESE AIRCRAFT ALTHOUGH THE FIRST AIRCRAFT RECEIVED IN
1958 HAVE EXCEEDED ~~THE~~ FIRST LINE LIFE. THE REPLACEMENT
LBR HELICOPTER SHOULD HAVE A MORE RELIABLE AND MORE
POWERFUL ENGINE, AND A TWIN-TURBINE MACHINE, WITH IFR
CAPABILITY - IS DEFINITELY PREFERRED. WE BELIEVE A
REPLACEMENT HELICOPTER ~~XXXXXXXXXX~~ CAN BE PROCURED
FOR LESS THAN HALF THE COST OF THE PRESENT MACHINE ~~AND~~
PHASED INTO THE LBR MISSION WHEN THE H43'S ARE RETIRED.
A SMALL OFF-THE-SHELF HELICOPTER WHICH COULD MEET THIS
REQUIREMENT IS NOW FLYING. OUR QOR FOR A REPLACEMENT
TWIN-TURBINE LBR HELICOPTER IS INCLOSED IN OUR STUDY.

SLIDE # 19 - OFF

SLIDE # 20 - ON *scheduled launches
w/ of capsule*

IN ADDITION TO THE HELICOPTERS WE HAVE DISCUSSED,
WE FORESEE A POSSIBLE REQUIREMENT FOR A LIMITED NUMBER OF

HEAVY-LIFT HELICOPTERS SUCH

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
HEAVY-LIFT HELICOPTERS SUCH AS THE ARMY CH-47 CHINOOK
OR THE MARINE CH-53. ALTHOUGH WE ARE NOT CURRENTLY
TASKED WITH AERIAL RECOVERY OF SUCH ITEMS AS THE
10,000 LB APOLLO SPACECRAFT AFTER THE ASTRONAUTS HAVE
BEEN REMOVED, THERE ARE NUMEROUS INDICATIONS THAT THE
RECOVERY OF LARGER AND HEAVIER AEROSPACE HARDWARE WILL
BE REQUIRED IN THE FUTURE. THIS IS AN ARS MISSION BY
DEFINITION, AND THE USE OF AIRCRAFT TO RECOVER SPACECRAFT,
REUSABLE BOOSTERS, OR OTHER LARGE SPACE HARDWARE, MUST
BE PLANNED FOR AS THESE REQUIREMENTS DEVELOP. ^{SINCE} THE CH3C
IS FAR MORE ECONOMICAL TO OPERATE THAN THE HEAVY-LIFT
HELICOPTERS AND MEETS 90% OF OUR MISSION REQUIREMENTS,
[REDACTED] ONLY A LIMITED NUMBER OF HEAVY-LIFT
HELICOPTERS WILL BE REQUIRED, [REDACTED]

[REDACTED] HOWEVER, IT APPEARS REASONABLE
TO ASSUME THAT ADDITIONAL HEAVY-LIFT ^{REQUIREMENTS} [REDACTED] WILL ^{RESULT}
[REDACTED] ^{FROM FUTURE} SPACE RESEARCH AND DEVELOPMENT
PROGRAMS.

SLIDE # 20 - OFF

SLIDE # 21 - ON

SUPPORT OF ARS

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ ~~CONFIDENTIAL~~ *Let's look at*
SECTION VI - SUPPORTING SYSTEMS

1. ~~SECRET~~ AIRCRAFT ALONE WILL NOT PROVIDE A COMPLETE RESCUE/RECOVERY SYSTEM. *OTHER ARE REQUIRED,* ELEMENTS IN SUPPORT OF THE MISSION ~~SECRET~~ *flexible and* ~~SECRET~~ AND THEY MUST BE CAPABLE OF EXPANDING AND ADAPTING TO CHANGING CONCEPTS OR UPDATING OF EQUIPMENT BROUGHT ABOUT BY STATE-OF-THE-ART IMPROVEMENTS.
2. WITHIN THE MATERIEL AREA, THE SYSTEM NECESSARY TO SUPPORT WORLD-WIDE DEPLOYMENT AND DISPERSAL IS ALREADY IN BEING AND LENDS ITSELF QUITE ADEQUATELY TO ~~SECRET~~ OUR MISSION. AFLC HAS YEARS OF EXPERIENCE IN SUPPORTING TACTICAL AIR COMMAND, COMPOSITE AIR STRIKE FORCES, MATS AIRLIFT EXERCISES AND SAC REFLEX ACTIONS. IF WE HAVE SUFFICIENT PRIORITY AND PRECEDENCE RATINGS, THIS SYSTEM SHOULD PROVE EFFECTIVE IN SUPPORTING ARS GLOBAL REQUIREMENTS. DURING DEPLOYMENT, THE USE OF MISSION SUPPORT KITS WILL PERMIT LIMITED MAINTENANCE IN THE FIELD.
3. UPDATING OF PRESENT EQUIPMENT, ADAPTATION AND USE OF EXISTING SIGNALLING DEVICES, AND A GENUINE AWARENESS OF A NEED FOR NEW IDEAS IS NECESSARY TO IMPROVE RESCUE EFFECTIVENESS. TO THIS END

ARS HAS SUBMITTED

~~SECRET~~

~~CONFIDENTIAL~~

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
ARS HAS SUBMITTED/ A NUMBER OF QUALITATIVE
OPERATIONAL REQUIREMENTS AND CLASS V MODIFICATION
REQUESTS TO IMPROVE OUR CAPABILITIES. FOR
EXAMPLE, WE MENTIONED A QOR FOR AN AIR-TO-AIR
REFUELING SYSTEM FOR THE CH3C, WHICH WAS SUBMITTED
~~IN~~ AUGUST 1964.

WE ALSO ESTABLISHED A QOR FOR AN
AERIAL RETRIEVAL SYSTEM FOR THE CH3C ~~IN~~ APR 64
TO PERMIT AERIAL RECOVERY OF HIGH VALUE HARDWARE
SUCH AS ROCKET BOOSTERS, CAMERA CASSETTES ON THE
NATIONAL MISSILE RANGES, AND BALLOON BORNE DATA
CASSETTES FOR AWS AND AEC. THIS SYSTEM
WILL PREVENT LOSS OR DAMAGE

TO EQUIPMENT DUE

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

TO EQUIPMENT DUE TO HARD IMPACT LANDINGS OR WATER IMMERSION. TO EFFECTIVELY EMPLOY THE CH3C ON LONG RANGE MISSIONS AND TO INSURE ACCURATE NAVIGATION OVER REMOTE LAND MASSES AND AT SEA, AN ADEQUATE LONG RANGE NAVIGATION SYSTEM IS REQUIRED. CONSEQUENTLY, A CLASS V MODIFICATION FOR INSTALLATION OF LORAN "C" AN/ARN 78 RADIO NAVIGATION EQUIPMENT WAS SUBMITTED ON 4 JAN 1965.

IN THE AREA OF LOCATION DEVICES, WE SUBMITTED A ~~WORK~~ FOR A SOUND FIXING AND RANGING (SOFAR) OCEAN CRASH LOCATOR SYSTEM ON 13 JAN 1964. THIS ~~SYSTEM~~ IS PRESENTLY UTILIZED IN THE MISSILE IMPACT LOCATION SYSTEM (MILS) ~~ON THE NATIONAL MISSILE RANGES.~~ DESPITE THE FACT THAT SOFAR CHARGES ARE CARRIED ABOARD USAF, NAVY, AND FAA AIRCRAFT OPERATING FROM HAWAII, THE POTENTIAL OF THIS LOCATING DEVICE HAS NOT, TO OUR KNOWLEDGE, BEEN EXPLOITED OR FULLY EXAMINED.

4. ~~IN TOTAL 8~~ QUALITATIVE OPERATIONAL REQUIREMENTS AND REQUESTS FOR MODIFICATIONS TO EXISTING EQUIPMENT ARE CONTAINED WITHIN THE STUDY. WE BELIEVE ALL ARE JUSTIFIED ON THE BASIS OF INCREASED MISSION EFFECTIVENESS.

SLIDE #21 - OFF

SLIDE #22 - ON

- space rescue
DURING THE SUCCESSFUL GEMINI MISSION ON 23 MAR,

AIR RESCUE SERVICE

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

SECRET

AIR RESCUE SERVICE / PROVIDED COVERAGE FROM LAUNCH TO FINAL RECOVERY. WE HAD 4 CH3C'S ON STATION IN CASE OF PAD ABORT, OR EJECTION OF THE ASTRONAUTS BELOW 13,500 FEET. BETWEEN FLORIDA AND AFRICA, OUR HC-54'S AND HC-97'S COVERED THE LAUNCH ABORT AREA. IN SOUTH AMERICA, AFRICA, THE INDIAN OCEAN, AUSTRALIA, AND THE SOUTH PACIFIC, RESCUE AIRCRAFT STOOD BY FOR A CONTINGENCY LANDING, WITH PARARESCUE PERSONNEL ABOARD TO SECURE THE COMMAND MODULE AND TO PROVIDE ASSISTANCE AND MEDICAL AID, IF NECESSARY. IN THE PLANNED LANDING AREA, AN ADDITIONAL 4 AIRCRAFT WERE AVAILABLE IN CASE OF OVERSHOOT OR UNDERSHOOT. OVERALL, WE HAD A TOTAL OF 37 FIXED-WING AND 4 HELICOPTERS INVOLVED.

ONE OF OUR HC-54'S FOUND THE SPACECRAFT AND PARACHUTED PARARESCUE PERSONNEL TO PROVIDE CAPSULE FLOTATION AND MEDICAL AID. IF WE^{HAD} HAD HEAVY-LIFT HELICOPTERS AT GRANDTURK, ARS COULD HAVE RETRIEVED THE ASTRONAUTS AND THE CAPSULE AT A FRACTION OF THE COST OF DEPLOYING THE AIRCRAFT CARRIER TO THE AREA.

WE HAVE ALSO GIVEN A LOT OF THOUGHT TO RESCUE IN SPACE ITSELF. FOR EXAMPLE, IF ONE OF THE MAJOR SUB-SYSTEMS OF THE GEMINI CAPSULE HAD FAILED, THUS PREVENTING RE-ENTRY OF

THIS PAGE IS UNCLASSIFIED

SECRET

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ ~~CONFIDENTIAL~~

PREVENTING RE-ENTRY OF / THE SPACECRAFT, THERE WAS NO MEANS OF PROVIDING RESCUE. WE BELIEVE THAT A SPACE RESCUE SYSTEM IS A VALID REQUIREMENT AND A NATURAL FOLLOW-ON TO RESCUE ON THE SURFACE - - NOT ONLY FOR HUMANITARIAN REASONS BUT ALSO BECAUSE OF CERTAIN PRACTICAL MILITARY ASPECTS.

SLIDE # 22 - OFF

SLIDE # 23 - ON *space Rescue*

FOR EXAMPLE, THERE WILL BE A REQUIREMENT TO PHYSICALLY EXAMINE THE DISTRESSED SPACECRAFT IN SPACE. IN CONVENTIONAL AVIATION, WE SPEND THOUSANDS OF MANHOURS PIECING TOGETHER CRASHED AIRCRAFT. FOR IDENTICAL REASONS, THE ONLY SURE WAY TO FIND OUT WHAT HAPPENED IS TO GAIN DIRECT ACCESS TO THE CAPSULE.

SECOND, A RAPID RESPONSE ^{By} ~~RESCUE~~ RESCUE MAY ALSO PROVIDE A RAPID RESPONSE FOR REPAIR. MANY DIFFICULTIES COULD OCCUR ^{which would be} BEYOND THE CAPABILITY OF THE PRIMARY CREW TO REPAIR, BUT WITHIN THE CAPABILITIES

OF AN AUXILIARY

~~SECRET~~ ~~CONFIDENTIAL~~

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

OF AN AUXILIARY CREW EQUIPPED WITH REPLACEMENT COMPONENTS FOR MALFUNCTIONING SUB-SYSTEMS. REPAIR IN THIS SENSE IS A MEANS OF RESCUE, SINCE REPAIR WOULD PERMIT THE CREW TO COMPLETE THE MISSION AND BE RECOVERED IN THE NORMAL MANNER.

THIRD, EQUIPPING EACH SPACE VEHICLE WITH AN ESCAPE MODULE WOULD BE PROHIBITIVELY COSTLY. ~~IN TERMS OF ADDITIONAL WEIGHT AND SPACE FOR THE CRAFT~~

~~THE REENTRY MODULE~~ FURTHER, ESCAPE AND RE-ENTRY BY AUXILIARY MODULE WOULD MERELY REMOVE THE CREW FROM ONE HOSTILE ENVIRONMENT INTO ANOTHER - THAT IS, INTO THE OCEAN, JUNGLES, OR MOUNTAINS OR, IN THE CASE OF A POLAR ORBIT, INTO THE ARCTIC, ANTARCTIC, OR ASIAN COMMUNIST LAND MASS.

FOURTH, THE CAPABILITY TO INTERCEPT, IDENTIFY OR GAIN ACCESS TO SPACE VEHICLES, COOPERATIVE, PASSIVE OR UNCOOPERATIVE, WILL BE A VALID MILITARY REQUIREMENT IN THE SPACE AGE.

WE BELIEVE THAT IMMEDIATE ACTIONS ^{should} ~~BE~~ BE TAKEN TO DEFINE AND PRODUCE ^{USAF} A RESCUE SYSTEM WHICH WILL MEET THE RESCUE REQUIREMENTS OF THE SPACE AGE. TO THIS END, WE SEEK YOUR ACTIVE ASSISTANCE IN GETTING THIS PROGRAM OFF THE GROUND.

SLIDE # 23 - OFF

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SECTION VIII

NOW LET'S REVIEW ORGANIZATION AND MANPOWER. WITHIN THE PAST TWO MONTHS, THE MATS STAFF WAS BRIEFED ON THE PROPOSED REORGANIZATION OF AIR RESCUE SERVICE, SO WE'LL MERELY HIT THE HIGHLIGHTS. ~~SECRET~~ ESSENTIALLY, THE PROPOSAL IS TO ESTABLISH 3 RESCUE WINGS, SUBORDINATE TO ARS HQS, TO HANDLE

SLIDE # 24 ON *proposed org.*
(Wg Org & JSARCS)

DAY-TO-DAY OPERATIONS. OVERALL PLANNING AND OPERATIONAL CONTROL OF THE RESCUE FORCES WILL REMAIN WITH THE HEADQUARTERS, THUS PERMITTING CENTRALIZED CONTROL AND DECENTRALIZED EXECUTION. WE BELIEVE THIS ORGANIZATIONAL STRUCTURE WILL PROVIDE THE FLEXIBILITY NECESSARY TO MEET, OR ADAPT TO, EXISTING AND CHANGING USAF AND DOD RESCUE AND RECOVERY REQUIREMENTS FOR THE NEXT DECADE. WE HOPE THAT THE 3 WING STRUCTURE WILL BE IN BEING BY THE 3D QTR OF FY 66.

SLIDE # 24 - OFF

SLIDE # 25 - ON - (MANPOWER)

THE MANPOWER REQUIRED ~~SECRET~~

is REFLECTED ON THIS CHART. FROM OUR CURRENT

AUTHORIZATIONS FOR 3458

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

AUTHORIZATIONS FOR 3458/ SPACES, THE FORCE BUILDS UP AS THE AIRCRAFT ARE PHASED INTO THE SYSTEM, UNTIL ALL AIRCRAFT ARE ON HAND IN THE 4TH QTR OF FY 68. THIS INVOLVES A GRADUAL BUILD-UP OF MANPOWER RESOURCES, AND RESULTS IN AN ADDITIVE REQUIREMENT OF 2659 AT THE COMPLETION OF THE PROGRAM. (255 ARE REQ. FOR REORGANIZATION, FOR A TOTAL OF 2914)

SLIDE # 25 - OFF

THE PERIOD WE'VE BEEN EXAMINING IS WITHIN THE NEXT 3 - 5 YEARS, BUT WE MUST NOW LOOK BEYOND THAT TIME, SINCE CONCURRENT DEVELOPMENT OF AIRCRAFT TO KEEP PACE WITH REQUIREMENTS IS ~~basic~~. basic.

SLIDE # 26 - ON ~~basic~~ Rotor Wg.

PAST EFFORTS TO GET AN OPERATIONAL VTOL OR VISTOL RESCUE/RECOVERY AIRCRAFT OF PRACTICAL VALUE INTO THE INVENTORY HAVE BEEN FRAGMENTED, AND HAVE RESULTED TO DATE IN LITTLE REAL PROGRESS. WE WILL NOT GO INTO DETAIL HERE IN DISCUSSING THE WHOLE SPECTRUM OF VISTOL POSSIBILITIES. OUR APPROACH HAS BEEN TO WEED OUT THE ~~unsuitable~~ CONFIGURATIONS, AND CONCENTRATE MORE THOROUGHLY ON THOSE WHICH GIVE REAL PROMISE OF FUTURE

APPLICATION IN THE

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

APPLICATION IN THE / GLOBAL AIR RECOVERY FORCE. ONE CENTRAL
CRITERIA IS SET. THAT IS - THE AIRCRAFT MUST BE ABLE TO
RESCUE PEOPLE, AND BE ADAPTABLE TO THE RECOVERY OF AEROSPACE
HARDWARE, FROM ANY PLACE AT ANY TIME. THIS MEANS FROM
UNPREPARED AREAS, AND IT MEANS LOW, (15 PSF OR LESS) DOWNWASH
VELOCITIES. ←

SLIDE # 26 - OFF

SLIDE # 27 - ON *STOWED ROTOR*

WE VISUALIZE A MINIMUM NUMBER OF TYPES - SOMETIMES INTER-
CHANGEABLE, AND DIRECTLY ADAPTABLE TO OUR COMPLETE RECOVERY
MISSION. THE RESEARCH WORK THAT HAS BEEN DONE BY THE
MILITARY AND INDUSTRY OVER THE PAST SEVERAL YEARS IS
PROVIDING MANY MORE TECHNICAL AND ECONOMIC OPTIONS IN
V/STOL THAN HERETOFORE. ~~AND~~ CONSEQUENTLY, A GREATER DIVERSITY
OF TASKS CAN BE FORESEEN FOR V/STOL AIRCRAFT. ~~THESE~~
~~REQUIREMENTS~~ WE EMPHASIZE THAT THIS GROWING
DIVERSITY OF OPTIONS AND TASKS MAKES IT MUCH MORE URGENT
THAN EVER, THAT AIRCRAFT ~~THESE~~ CHARACTERISTICS BE MATCHED
PRECISELY AND CAREFULLY TO OPERATIONAL REQUIREMENTS.

A V/STOL AIRCRAFT FOR THE TACTICAL RESCUE MISSION
REQUIRES EXTENDED HOVER AND MANEUVER AT HELICOPTER SPEEDS. THE
MACHINE MUST OPERATE TO AND FROM COMPLETELY UNPREPARED SITES, AND

SLIDE # 27 - OFF

SLIDE # 28 - ON *Hot cycle DISC*



NEITHER HIGH DOWNWASH

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL
NEITHER HIGH DOWNWASH/VELOCITIES NOR EXCESSIVE
HOVER FUEL FLOW CAN BE TOLERATED. THE HOT CYCLE,
TRI-SECTOR ROTOR SYSTEM WOULD TEND TO GENERATE LOW
DOWNWASH VELOCITIES AND PERMIT EXTENDED FLIGHT AT
VERY LOW SPEEDS WITHOUT APPRECIABLE INCREASE IN
MISSION FUEL LOAD. THIS WOULD PROVIDE EXCELLENT
OPERATIONAL RESCUE FLEXIBILITY. WE BELIEVE THE
CONCEPT HAS VERY PROMISING APPLICATION AS A HIGH-
PERFORMANCE SUBSONIC (450 - 500 K) RECOVERY VEHICLE. 
IT COULD ALSO BE AIR-TO-AIR REFUELED FROM KC-135'S OR
KC-130'S IN THE SAME MANNER AS TACTICAL FIGHTERS. IT
COULD ACCOMPANY AIR STRIKES OR STAND STRIP ALERT AT
ADVANCED UNPREPARED SITES, PERFORMING IMMEDIATE
RESCUE OF DOWNED  CREWS.

SLIDE # 28 - OFF

SLIDE # 29 - ON *ATRAM*

WITHOUT EFFECTIVE "STATE OF THE ART"
NAVIGATION AND COMMUNICATION SYSTEMS, RESCUE WILL
BE UNABLE TO COPE WITH THE REQUIREMENTS IMPOSED BY THE
TACTICAL FORCES AND SPACE OPERATIONS. CONSISTENT
WITH TECHNICAL DEVELOPMENTS, AND THE AIRCRAFT IN OUR
INVENTORY AT ANY GIVEN TIME, WE NEED THE BEST AVAILABLE.
ONE CONCEPT IN WHICH WE ARE INTERESTED IS AUTOMATIC
TERRAIN RECOGNITION AND NAVIGATION.

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

SUCH A SYSTEM/ IS PRESENTLY IN USE IN THE MACE
IN THE HC-130'S OR CH3C'S IT WOULD PERMIT PINPOINT
PENETRATIONS INTO HOSTILE TERRITORY AT NIGHT OR IN
IFR , AND WE BELIEVE THAT SUCH EQUIPMENT COULD
PROVIDE A CAPABILITY NOT PREVIOUSLY AVAILABLE IN
MANNED AIRCRAFT.

WE HAVEN'T FULLY EXAMINED THE POSSIBILITIES
OF USING SUCH A SYSTEM FOR COMBAT RESCUE, OR FOR
OTHER PURPOSES. HOWEVER, MANY APPLICATIONS
APPEAR FEASIBLE FOR PEACETIME USES, SUCH AS NAVIGATION

IN REMOTE AREAS,

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

IN REMOTE AREAS, / AUTOMATIC LETDOWNS AT REMOTE AIRFIELDS WITHOUT AN APPROACH AID, OR EVEN EMERGENCY LET-DOWNS IF THE APPROACH AID BECOMES INOPERATIVE. (IF WE DETERMINE A DEFINITE APPLICATION TO THE AIR RESCUE MISSION, WE PROPOSE TO REQUEST AN ENGINEERING STUDY TO DETERMINE THE COSTS OF REMOVAL OF THE GUIDANCE SYSTEM FROM THE MACE, REDESIGN AND INSTALLATION IN THE HC-130H).

IN ADDITION TO ADVANCED AIRCRAFT AND NAVIGATION SYSTEMS, WE ALSO HAVE A REQUIREMENT FOR DEVELOPING A SYSTEM, OR SYSTEMS, WHICH WILL DETECT PERSONS OR AIRCRAFT CONCEALED FROM VISUAL OBSERVATIONS AND NOT EQUIPPED WITH BEACONRY. THIS MAY BE A FORM OF A LIGHT AMPLIFICATION, ~~SECRET~~ INFRA-RED APPLICATIONS OR MAGNETIC DEVICES.

SLIDE # 29 - OFF

SLIDE # 30 - ON *SATELLITE*

WE ALSO NEED A SYSTEM TO RECEIVE AND RELAY EMERGENCY ACFT OR PERSONNEL DISTRESS BEACONS OR SIGNALS, THUS FIXING A LOCATION ON EARTH WITHIN REASONABLE SEARCH PARAMETERS. SATELLITES MAY BE THE ANSWER FOR RELAYING LOCATION AND IDENTIFICATION OF PERSONNEL DOWNED IN HOSTILE TERRITORY, AND FOR PROVIDING A SECURE MEANS OF COMMUNICATING RECOVERY INFORMATION. SUCH A SATELLITE IN A POLAR ORBIT COULD PROVIDE COMPLETE COVERAGE OF THE EARTH'S SURFACE EACH 18 HRS.

SLIDE # 30 - OFF

Para WE'VE COVERED A

~~SECRET~~ CONFIDENTIAL

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ CONFIDENTIAL

WE'VE COVERED A LARGE AMOUNT OF MATERIAL
IN A RELATIVELY SHORT TIME, INCLUDING SOME PHILOSOPHIES
AND CONCEPTS WHICH HAVE NOT BEEN PREVIOUSLY PRESENTED.
AS A BRIEF SUMMARY, WE'D LIKE TO PRESENT OUR OVERALL
VIEW OF THE RESCUE AND RECOVERY MISSION AND FORCES VS
THE REQUIREMENTS FOR THE NEXT 10 YRS. ALL OF OUR
EQUIPMENT MUST BE INTER-RELATED AND ~~OF~~ SUPPORT USAF
COMBAT CAPABILITY. *IS A PRIMARY CONSIDERATION.*

SLIDE #31 - ON *00: space*

WE NEED A MODERN FIXED-WING FORCE TO MEET BOTH
FORECAST SURFACE ~~REQUIREMENTS~~ REQUIREMENTS FOR THE
MANNED SPACE PROGRAMS, AND THE CONVENTIONAL SAR MISSION.

OVERLAY #1 - ON *CONVENTIONAL*

THESE FORCES ARE MUTUALLY SUPPORTING AND, IN FACT, ARE
IDENTICAL IN CAPABILITY. THIS WILL PROVIDE THE NECESSARY
DEPTH IN FIXED-WING RESOURCES, ESSENTIAL TO MEET OUR GLOBAL
RESCUE AND AEROSPACE HARDWARE RECOVERY RESPONSIBILITIES.

OVERLAY #2 - ON *Tactical Heli*

OUR HIGH PERFORMANCE HELICOPTERS WILL BE THE BACKBONE
OF OUR COMBAT RECOVERY FORCES, BUT THEY ARE ALSO
ESSENTIAL TO THE PEACETIME MISSION. THESE AIRCRAFT ARE
AS CLOSE AS WE CAN COME TO A LONG RANGE V/STOL
CAPABILITY DURING THE PERIOD THEY ARE REQUIRED. THE

INTER-RELATIONSHIP WITH THE

~~SECRET~~ CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ **CONFIDENTIAL**

INTER-RELATIONSHIP WITH THE SPACE RECOVERY FORCES AND THE CONVENTIONAL SAR FORCES CAN BE STRENGTHENED BY AN AIR-TO-AIR REFUELING CAPABILITY, WHICH WILL GIVE ARS A GLOBAL COVERAGE FOR RESCUE OF INJURED PERSONNEL OR GROUPS, AND RETRIEVAL OF MATERIEL. (ON THE COST EFFECTIVENESS SIDE, THIS TEAM WILL PAY ITS WAY BY ELIMINATING THE REQUIREMENT FOR SUBSTANTIAL NUMBERS OF COMBAT SHIPS TIED UP IN SPACE RECOVERY PROGRAMS.)

OVERLAY # 3 - ON **LCR**

THE LAST ELEMENT OF THE RESCUE FAMILY IS THE LOCAL BASE RESCUE HELICOPTER FORCE, WHICH MORE THAN PAYS FOR ITSELF EACH YEAR. THE INTER-RELATIONSHIP STILL HOLDS WITH THE OTHER RESCUE FORCES, BY PROVIDING A VERTICAL LIFT CAPABILITY TO SUPPLEMENT THE FIXED-WING FORCES WHEN AND AS REQUIRED.

EACH RESCUE ELEMENT HAS A JOB TO DO AND EACH CAN, TO A VARYING DEGREE, COMPLEMENT THE OTHER DEPENDING ON THE SITUATION. THESE CHARACTERISTICS WILL PERMIT US TO TAILOR A FORCE TO COVER THE FULL SPECTRUM OF COMBAT REQUIREMENTS - FROM RESCUE COVERAGE DURING TAKE-OFF,

ALONG THE ROUTES

CONFIDENTIAL

~~SECRET~~

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~

CONFIDENTIAL

ALONG THE ROUTES/TO THE COMBAT AREA, PICKUP WITHIN THE COMBAT AREA, AND COVERAGE OF THE LANDING PHASE AT HOME BASE.

RESCUE IS A FORCE WHICH CAN AND DOES PAY ITS WAY IN PEACETIME BY CONSERVING HUMAN AND MATERIEL RESOURCES. IN THE COMBAT SITUATION, WE NOT ONLY BALANCE THE BOOKS, BUT GET WELL AHEAD. THE RESCUE & RECOVERY SITUATION IS DYNAMIC AND CHANGING. EVEN WHILE THIS BRIEFING WAS BEING PREPARED, TWO AGENCIES INDICATED FUTURE RECOVERY REQUIREMENTS OF WHICH WE HAD NOT BEEN PREVIOUSLY AWARE

SLIDE # 31 - OFF

SLIDE # 32 - ON (10 SECONDS ONLY)

SLIDE # 33 - ON (10 SECONDS ONLY)

SLIDE # 34 - ON (10 SECONDS ONLY)

101
117
HEAVY
AIRCRAFT
wgs. 17
75
7298
Mission

THESE FINAL CHARTS SUMMARIZE THE

→ Slide 35
ON
(ARS
Emblem

REQUIREMENTS AS WE SEE THEM. OUR STUDY IS ONLY A STARTING POINT, AND WE MUST CONTINUE TO PRESS FOR CHANGES AND IMPROVEMENTS AS FUTURE DEVELOPMENTS DICTATE. ~~WE BELIEVE, FOR THE FIRST TIME IN ARS HISTORY, WE HAVE THE OPPORTUNITY TO BECOME A TRULY EFFICIENT GLOBAL RESCUE ORGANIZATION~~ IN SUITABLE NUMBERS, THE HC-130 AND THE CH3C WILL FORM THE BASIS

FOR A GOOD

~~SECRET~~

CONFIDENTIAL

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

THIS PAGE IS UNCLASSIFIED

~~SECRET~~ ~~CONFIDENTIAL~~

FOR A GOOD / BEGINNING - NOW AND IN THE NEXT FOUR
TO SEVEN YEARS. PHASED IN WITH V/STOL AIRCRAFT,
AND COMPATIBLE NAVIGATION AND COMMUNICATIONS
SYSTEMS WHICH SEEM WELL WITHIN REACH OF THE STATE-OF-
THE-ART, WE CAN ACHIEVE AND MAINTAIN A WORLD-WIDE
USAF AIR RESCUE CAPABILITY DURING THE NEXT DECADE.

*We believe, for the first time in
ARS history, we have the
opportunity to become a
truly effective + efficient
global rescue organization.*

T
H
I
S

P
A
G
E

I
S

U
N
C
L
A
S
S
I
F
I
E
D

CONFIDENTIAL

~~SECRET~~